6557-03N/03S/43N/43S

SERVICE MANUAL

6557-03N/43N

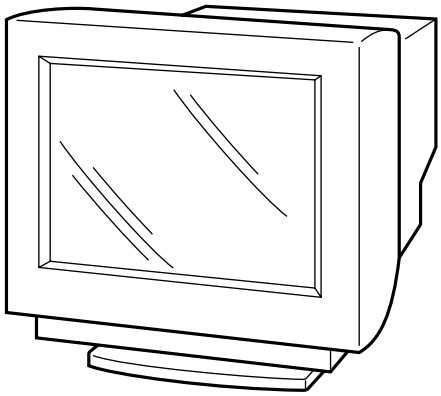
N. Hemisphere Model

AEP Model

Japan Model

6557-03S/43S

S. Hemisphere Model



N3 CHASSIS

SPECIFICATIONS

Picture tube	0.25 – 0.27 mm aperture grille pitch 19 inches measured diagonally 90-degree deflection
Viewable image size	Approx. 365 × 273 mm (w/h) (14 3/8 × 10 3/4 inches) 18.0″ viewing image
Resolution	Horizontal: Max. 1600 dots Vertical: Max. 1200 lines
Standard image area	Approx. 330 × 264 mm (w/h) (13 × 10 1/2 inches) or Approx. 352 × 264 mm (w/h) (13 7/8 × 10 1/2 inches)
Deflection frequency	Horizontal: 30 to 94 kHz Vertical: 50 to 160 Hz 256 < Total Line < 2048
AC input voltage/current	100 to 240 V, 50 – 60 Hz, 1.8 – 1.0 A
Power consumption	Max. 130 W
Dimensions	462.2 × 477.5 × 475.5 mm (w/h/d) (18 1/4 × 18 7/8 × 18 3/4 inches)
Mass	Approx. 25 kg (55 lb 2 oz)

Design and specifications are subject to change without notice.

MODEL	SPEC.	
	BODY COLOR	DEST.
6557-03N	WHITE TYPE	NH, AEP, J
6557-03S		SH
6557-43N	BLACK TYPE	NH, AEP, J
6557-43S		SH

COLOR MONITOR

IBM®

SAFETY CHECK-OUT
(US Model only)

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.
4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
5. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
6. Check the line cords for cracks and abrasion. Recommend the replacement of any such line cord to the customer.
7. Check the B+ and HV to see if they are specified values. Make sure your instruments are accurate; be suspicious of your HV meter if sets always have low HV.
8. Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC Leakage. Check leakage as described below.

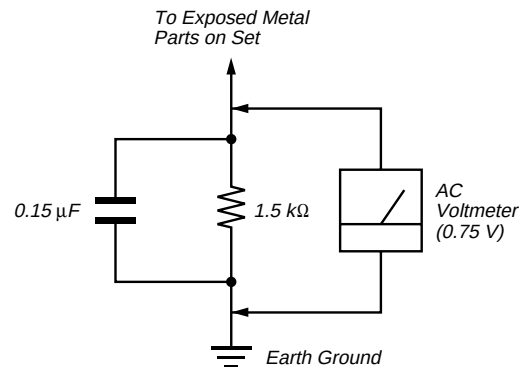


Fig. A. Using an AC voltmeter to check AC leakage.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers).

Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOMs that are suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

WARNING!!
NEVER TURN ON THE POWER IN A CONDITION IN WHICH THE DEGAUSS COIL HAS BEEN REMOVED.

SAFETY-RELATED COMPONENT WARNING!!
COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL FOR SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL FOR SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

AVERTISSEMENT!!
NE JAMAIS METTRE SOUS TENSION QUAND LA BOBINE DE DEMAGNETISATION EST ENLEVÉE.

ATTENTION AUX COMPOSANTS RELATIFS À LA SÉCURITÉ!!
LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET UNE MARQUE ⚠ SONT CRITIQUES POUR LA SÉCURITÉ. NE LES REMPLACER QUE PAR UNE PIÈCE PORTANT LE NUMÉRO SPECIFIÉ. LES RÉGLAGES DE CIRCUIT DONT L'IMPORTANCE EST CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT SONT IDENTIFIÉS DANS LE PRÉSENT MANUEL. SUIVRE CES PROCÉDURES LORS DE CHAQUE REMPLACEMENT DE COMPOSANTS CRITIQUES, OU LORSQU'UN MAUVAIS FONCTIONNE-MENT EST SUSPECTÉ.

POWER SAVING FUNCTION

This monitor meets the power-saving guidelines set by VESA and Energy Star, as well as the more stringent NUTEK .
If the monitor is connected to a computer or video graphics board that is VESA DPMS (Display Power Management Signaling) compliant, the monitor will automatically reduce power consumption in three stages as shown below.
You can set the delay time before the monitor enters the power saving mode using the OSD. Set the time according to "Setting the power saving delay time" on page 15.

Note

If no video signal is input to the monitor, the "NO INPUT SIGNAL" message (page 18) appears. After the delay time has passed, the power saving function automatically puts the monitor into the active-off mode and the ⏻ indicator lights up orange. Once the horizontal and vertical sync signals are detected, the monitor automatically resumes its normal operation mode.

	Power consumption mode	Screen	Horizontal sync signal	Vertical sync signal	Power consumption	Recovery time	⏻ indicator
1	Normal operation	active	present	present	≤ 130 W	—	Green
2	Standby (1st mode)	blank	absent	present	≤ 80 W	Approx. 3 sec.	Green and orange alternate
3	Suspend (2nd mode)	blank	present	absent	≤ 15 W	Approx. 3 sec.	Green and orange alternate
4	Active-off (3rd mode)	blank	absent	absent	≤ 5 W	Approx. 15 sec. max.	Orange
5	Power-off	—	—	—	0 W	—	Off

DIAGNOSIS

Failure	Power LED
+B failure	Orange (0.5 sec) → Off (0.5 sec)
Horizontal / Vertical Deflection failure, Thermal protector	Orange (1.5 sec) → Off (0.5 sec)
ABL protector	Orange (0.5 sec) → Off (1.5 sec)
HV failure	Orange (0.25 sec) → Off (0.5 sec) → Orange (0.25 sec) → Off (1.25 sec)
Aging / Self Test	Orange (0.5 sec) → Off (0.5 sec) → Green (0.5 sec) → Off (0.5 sec)

Aging Mode (Video Aging) : During Power Save, press "MENU" key for longer than 2 second.
Self Test (OSD Color Bar) : During Power Save, press "CONTRAST" + (➡) key for longer than 2 second.
Reliability Check Mode : During Power Save, press "CONTRAST"– (⬅) key for longer than 2 second.

TIMING SPECIFICATION

MODE AT PRODUCTION	MODE 1	MODE 2	MODE 3	MODE 4	MODE 5	MODE 6	MODE 7	MODE 8	MODE 9
RESOLUTION	656 X 496	640 X 480	800 X 600	1024 X 768	1024 X 768	1280 X 1024	1280 X 960	1280 X 1024	1600 X 1200
CLOCK	25.175 MHz	36.000 MHz	56.250 MHz	78.750 MHz	94.500 MHz	135.000 MHz	148.500 MHz	157.500 MHz	202.500 MHz
— HORIZONTAL —									
H-FREQ	31.469 kHz	43.269 kHz	53.674 kHz	60.023 kHz	68.677 kHz	79.976 kHz	85.938 kHz	91.146 kHz	93.750 kHz
	usec	usec	usec	usec	usec	usec	usec	usec	usec
H. TOTAL	31.778	23.111	18.631	16.66	14.561	12.504	11.636	10.971	10.667
H. BLK	5.72	5.333	4.409	3.657	3.725	3.022	3.017	2.844	2.765
H. FP	0.318	1.556	0.569	0.203	0.508	0.119	0.431	0.406	0.316
H. SYNC	3.813	1.556	1.138	1.219	1.016	1.067	1.077	1.016	0.948
H. BP	1.589	2.222	2.702	2.235	2.201	1.837	1.508	1.422	1.501
H. ACTIV	26.058	17.778	14.222	13.003	10.836	9.481	8.62	8.127	7.901
— VERTICAL —									
V. FREQ(HZ)	59.940 Hz	85.00 Hz	85.061 Hz	75.029 Hz	84.997 Hz	75.025 Hz	85.002 Hz	85.024 Hz	75.000 Hz
	lines	lines	lines	lines	lines	lines	lines	lines	lines
V. TOTAL	525	509	631	800	808	1066	1011	1072	1250
V. BLK	29	29	31	32	40	42	51	48	50
V. FP	2	1	1	1	1	1	1	1	1
V. SYNC	2	3	3	3	3	3	3	3	3
V. BP	25	25	27	28	36	38	47	44	6
V. ACTIV	496	480	600	768	768	1024	960	1024	1200
— SYNC —									
INT(G)	NO	NO	NO	NO	NO	NO	NO	NO	NO
EXT(H/V)/POLARITY	YES N/N	YES N/N	YES P/P	YES P/P	YES P/P	YES P/P	YES P/P	YES P/P	YES P/P
EXT(CS)/POLARITY	NO	NO	NO	NO	NO	NO	NO	NO	NO
INT/NON INT	NON INT	NON INT	NON INT	NON INT	NON INT	NON INT	NON INT	NON INT	NON INT

98.1.13 VER.

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The operating instructions mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remain as in the manual.

SECTION 1
GENERAL

Precautions

Installation

- Prevent internal heat build-up by allowing adequate air circulation. Do not place the monitor on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies) that may block the ventilation holes.
- Do not install the monitor near heat sources such as radiators or air ducts, or in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.
- Do not place the monitor near equipment which generates magnetism, such as a transformer or high voltage power lines.

Maintenance

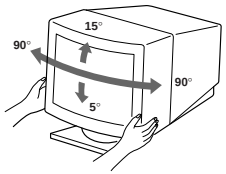
- Clean the cabinet, panel and controls with a soft cloth lightly moistened with a mild detergent solution. Do not use any type of abrasive pad, scouring powder or solvent, such as alcohol or benzine.
- Do not rub, touch, or tap the surface of the screen with sharp or abrasive items such as a ballpoint pen or screwdriver. This type of contact may result in a scratched picture tube.

Transportation

When you transport this monitor for repair or shipment, use the original carton and packing materials.

Use of the Tilt-Swivel

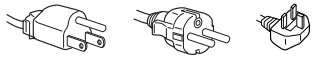
With the tilt-swivel, this monitor can be adjusted to the desired angle within 180° horizontally and 20° vertically. To turn the monitor vertically and horizontally, hold it at the bottom with both hands as illustrated below.



Warning on power connection

- Use an appropriate power cord for your local power supply.

Examples of plug types



for 100 to 120 V AC **for 200 to 240 V AC** **for 240 V AC only**

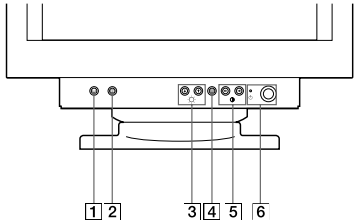
- Before disconnecting the power cord, wait at least 30 seconds after turning off the power to allow the static electricity on the CRT display surface to discharge.
- After the power has been turned on, the CRT is demagnetized (degaussed) for about 3 seconds. This generates a strong magnetic field around the metal frame, which may affect the data stored on magnetic tapes and disks near the bezel. Place magnetic recording equipment, tapes and disks away from this monitor.

The outlet should be installed near the equipment and be easily accessible.

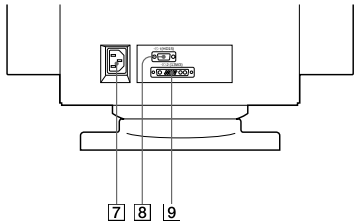
Identifying Parts and Controls

See the pages in parentheses for further details.

Front



Rear



1 ⇢ (reset) button (page 14)
Resets the adjustments to the factory settings.

2 ⊡ (auto sizing and centering) button (page 5)
Automatically adjusts the size and centering of the images.

3 ☼ (brightness) (🡓/🡑) buttons (pages 5 – 14)
Adjust the picture brightness.

Function as the (🡓/🡑) buttons when adjusting other items.

4 ⊜ (menu) button (pages 5 – 14)
Displays the MENU OSD.

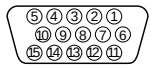
5 ◑ (contrast) (🡐/🡒) buttons (pages 5 – 14, 18)
Adjust the contrast.

Function as the (🡐/🡒) buttons when adjusting other items.

6 ⏻ (power) switch and indicator (pages 15, 18)
Turns the monitor on or off.
The indicator lights up in green when the monitor is turned on, and lights up in orange when the monitor is in power saving mode.

7 AC IN connector
Provides AC power to the monitor.

8 Video input 1 connector (HD15)
Inputs RGB video signals (0.700 Vp-p, positive) and SYNC signals.



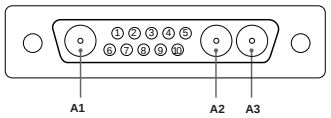
Pin No.	Signal	Pin No.	Signal
1	Red	8	Blue Ground
2	Green (Composite Sync on Green)	9	DDC + 5V*
		10	Ground
		11	ID (Ground)
3	Blue	12	Bi-Directional Data (SDA)*
4	ID (Ground)		
5	DDC Ground*	13	H. Sync
6	Red Ground	14	V. Sync
7	Green Ground	15	Data Clock(SCL)*

* Display Data Channel (DDC) Standard of VESA

(continued)

EN

9 Video input 2 connector (13W3 cable)
Inputs RGB video signal (0.700 Vp-p, positive).



Pin No.	Signal	Pin No.	Signal
A1	Red Video & Ground	4	Ground
		5	C.Sync*
A2	Green Video & Ground	6	—
		7	Bi-Directional Data (SDA)**
A3	Blue Video & Ground		
1	—	8	DDC + 5V**
2	Data Clock (SCL)**	9	V.Sync
		10	Ground
3	—		

* Pins serve a dual purpose as combined sync input and as H.sync input if V.Sync is present on pin no. 9.
** Display Data Channel (DDC) Standard by VESA

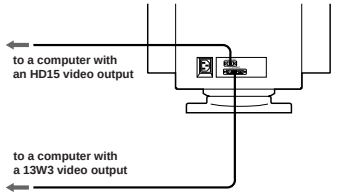
Note
If you use a computer or video board of high output level (about 1.0 Vp-p), you may not be able to obtain the optimum display. In such case, try decreasing the picture contrast, or use a computer or video board with a lower output level.

Setup

This monitor works with platforms running at horizontal frequencies between 30 and 94 kHz.

Step 1: Connect the monitor to the computer

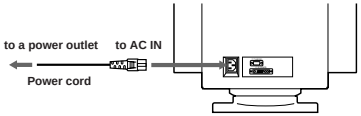
With the computer switched off, connect the video signal cable to the video output of the computer.



Note
Do not short the pins of the video signal cable.

Step 2: Connect the power cord

With the monitor switched off, connect one end of the proper power cord for your local supply to the monitor and the other end to a power outlet.



Step 3: Turn on the monitor and computer

The installation of your monitor is complete.

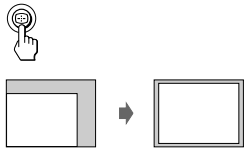
Note
If "OUT OF SCAN RANGE" or "NO INPUT SIGNAL" appears on the screen, see "Warning Messages" on page 16.

Automatically Adjusting the Size and Centering of the Picture

By pressing the ⊡ button, the size and centering of the picture are automatically adjusted to fit the screen.

1 Turn on the monitor and computer.

2 Press the ⊡ button.
The picture is adjusted to fit the center of the screen.



Notes
- This function is intended for use with a computer running graphic user interface software that provides a full-screen picture. It may not work properly if the background color is dark or if the input picture does not fill the screen to the edges.
- The screen may go blank for a few seconds while performing the auto-sizing function. This is not a malfunction.
- Although the signals for picture aspect ratio 5:4 (resolution: 1280 × 1024) do not fill the screen to the edges, the picture is accurately displayed.

Selecting the On-screen Display Language

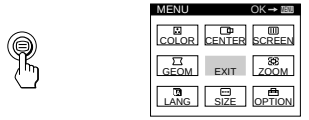
If you need to change the OSD language, see "Using the LANG (Language) On-screen Display" on page 14.
The default setting is English.

Selecting the Input Signal

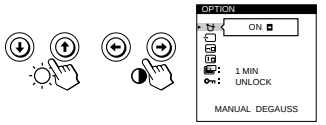
This monitor has two signal input connectors (HD15 and 13W3) and can be connected to two computers simultaneously. Select the input signal you want to view as follows.

1 Turn on the monitor and both computers.

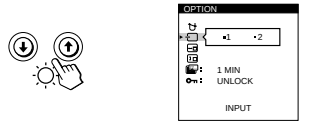
2 Press the ⊜ button.
The MENU OSD appears.



3 Press the ☼↓/↑ and ◑←/→ buttons to select " OPTION," and press the ⊜ button again.
The OPTION OSD appears.



4 Press the ☼↓/↑ buttons to select " (INPUT)."



(continued)

EN

5 **Press the ◑⬅/➡ buttons to select "1" or "2."**

When "1" is selected
The signal from the computer connected to the HD15 connector is input to the monitor.

When "2" is selected
The signal from the computer connected to the 13W3 connector is input to the monitor.

The OPTION OSD automatically disappears after about 30 seconds.
To close the OSD, press the ⊜ button again.

For more information on using the OSD, see "Introducing the On-screen Display System" on page 7.

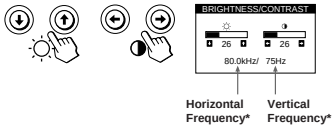
When you connect computers to both connectors
If you restart the computer you want to view, or that computer is in power saving mode, the monitor may automatically select the other connector's signal. This is because the monitor switches from the interrupted signal to the constant signal. If this happens, manually select the desired signal.

Before adjusting
- Connect the monitor and the computer, and turn them on.
- Select "🅰 LANG" in the MENU OSD, then select "ENGLISH" (see page 14).

Adjusting the Picture Brightness and Contrast

Once the setting is adjusted, it will be stored in memory for all input signals received.

1 **Press the ☼ (brightness) ⬇/⬆ or ◑ (contrast) ⬅/➡ buttons.**
The BRIGHTNESS/CONTRAST OSD appears.



2 **For brightness adjustment**
Press the ☼⬇/⬆ buttons.

⬆ . . . for more brightness
⬇ . . . for less brightness

For contrast adjustment
Press the ◑⬅/➡ buttons.

➡ . . . for more contrast
⬅ . . . for less contrast

The OSD automatically disappears after about 3 seconds.

To reset, press the ⇢ (reset) button while the OSD is on. The brightness and contrast are both reset to the factory settings.

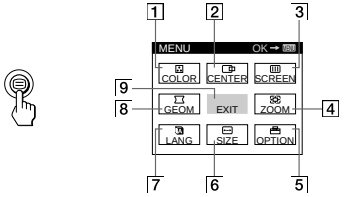
* The horizontal and vertical frequencies for the received input signal appear in the BRIGHTNESS/CONTRAST OSD.

Introducing the On-screen Display System

Most adjustments are made using the MENU OSD.

MENU OSD

Press the ⊜ button to display the MENU OSD.
This MENU OSD contains links to the other OSDs described below.



1 **COLOR**
Displays the COLOR OSD for adjusting the color temperature.

2 **CENTER**
Displays the CENTER OSD for adjusting the centering of the picture.

3 **SCREEN**
Displays the SCREEN OSD for adjusting the vertical and horizontal convergence, etc.

4 **ZOOM**
Displays the ZOOM OSD for enlarging and reducing the picture.

5 **OPTION**
Displays the OPTION OSD for adjusting the OSD position and degaussing the screen, etc.

6 **SIZE**
Displays the SIZE OSD for adjusting the picture size.

7 **LANG**
Displays the LANGUAGE OSD for selecting the language.

8 **GEOM**
Displays the GEOMETRY OSD for adjusting the picture rotation and pincushion, etc.

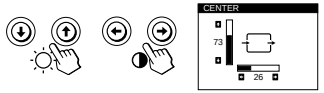
9 **EXIT**
Closes the MENU OSD.

Using the CENTER On-screen Display

The CENTER settings allow you to adjust the centering of the picture.
Once the setting is adjusted, it will be stored in memory for the current input signal.

1 **Press the ⊜ button.**
The MENU OSD appears.

2 **Press the ☼⬇/⬆ and ◑⬅/➡ buttons to select "🖵 CENTER," and press the ⊜ button again.**
The CENTER OSD appears.



3 **For horizontal adjustment**
Press the ◑⬅/➡ buttons.

➡ . . . to move the picture right
⬅ . . . to move the picture left

For vertical adjustment
Press the ☼⬇/⬆ buttons.

⬆ . . . to move the picture up
⬇ . . . to move the picture down

The OSD automatically disappears after about 30 seconds.
To close the OSD, press the ⊜ button again.

To reset, press the ⇢ (reset) button while the OSD is on. The horizontal and vertical centerings are both reset to the factory settings.

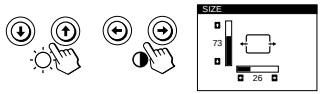
EN

Using the SIZE On-screen Display

The SIZE settings allow you to adjust the size of the picture. Once the setting is adjusted, it will be stored in memory for the current input signal.

1 Press the ⊜ button.
The MENU OSD appears.

2 Press the ☼↓/↑ and ◑←/→ buttons to select " ⇿ SIZE," and press the ⊜ button again.
The SIZE OSD appears.



3 For horizontal adjustment
Press the ◑←/→ buttons.

→ . . . to increase picture width
← . . . to decrease picture width

For vertical adjustment
Press the ☼↓/↑ buttons.

↑ . . . to increase picture height
↓ . . . to decrease picture height

The OSD automatically disappears after about 30 seconds. To close the OSD, press the ⊜ button again.

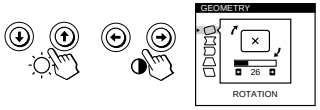
To reset, press the ⇢ (reset) button while the OSD is on. The horizontal and vertical sizes are both reset to the factory settings.

Using the GEOM (Geometry) On-screen Display

The GEOM (geometry) settings allow you to adjust the shape and orientation of the picture.
Once the rotation is adjusted, it will be stored in memory for all input signals received. All other adjustments will be stored in memory for the current input signal.

1 Press the ⊜ button.
The MENU OSD appears.

2 Press the ☼↓/↑ and ◑←/→ buttons to select " ⌷ GEOM," and press the ⊜ button again.
The GEOMETRY OSD appears.



3 Press the ☼↓/↑ buttons to select the item you want to adjust.

Select	To
ROTATION	adjust the picture rotation
PINCUSHION	adjust the picture sides
PIN BALANCE	adjust the picture side balance
KEYSTONE	adjust the picture width
KEY BALANCE	adjust the picture shape balance

4 Press the ◑←/→ buttons to adjust the settings.

For	Press
ROTATION	→ . . . to rotate the picture clockwise ← . . . to rotate the picture counterclockwise
PINCUSHION	→ . . . to expand the picture sides ← . . . to contract the picture sides
PIN BALANCE	→ . . . to move the picture sides to the right ← . . . to move the picture sides to the left
KEYSTONE	→ . . . to increase the picture width at the top ← . . . to decrease the picture width at the top
KEY BALANCE	→ . . . to move the top of the picture to the right ← . . . to move the top of the picture to the left

The OSD automatically disappears after about 30 seconds. To close the OSD, press the ⊜ button again.

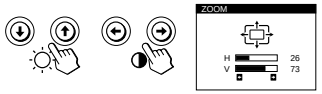
To reset, press the ⇢ (reset) button while the OSD is on. The selected item is reset to the factory setting.

Using the ZOOM On-screen Display

The ZOOM settings allow you to enlarge or reduce the picture.
Once the setting is adjusted, it will be stored in memory for the current input signal.

1 Press the ⊜ button.
The MENU OSD appears.

2 Press the ☼↓/↑ and ◑←/→ buttons to select " ZOOM," and press the ⊜ button again.
The ZOOM OSD appears.



3 Press the ◑←/→buttons to adjust the picture zoom.

→ . . . to enlarge the picture
← . . . to reduce the picture

The OSD automatically disappears after about 30 seconds. To close the OSD, press the ⊜ button again.

To reset, press the ⇢ (reset) button while the OSD is on.

Note
The picture zoom adjustment will stop as soon as either the horizontal or vertical size reaches its maximum or minimum value.

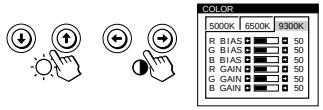
EN

Using the COLOR On-screen Display

You can change the monitor's color temperature. For example, you can adjust or change the colors of a picture on the screen to match the actual colors of the printed picture. Once the setting is adjusted, it will be stored in memory for all input signals received.

1 Press the ⊜ button.
The MENU OSD appears.

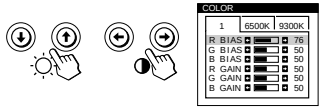
2 Press the ☼↓/↑ and ◑←/→ buttons to select " COLOR," and press the ⊜ button again.
The COLOR OSD appears.



3 Press the ◑←/→ buttons to select the color temperature.

There are three color temperature modes in the OSD.
The preset adjustments are:
5000K, 6500K, 9300K

4 Fine tuning the color temperature
Press the ☼↓/↑ buttons to select an item and adjust by pressing the ◑←/→ buttons.



Select **R (red), G (green), or B (blue) BIAS** to adjust the black level of each color's signal.

Select **R (red), G (green), or B (blue) GAIN** to adjust the white level of each color's signal.

The "5000K," "6500K" or "9300K" disappears and the new color settings are memorized for each of the three color modes.
The color temperature modes change as follows:
5000K→ 1, 6500K→ 2, 9300K→ 3

The OSD automatically disappears after about 30 seconds. To close the OSD, press the ⊜ button again.

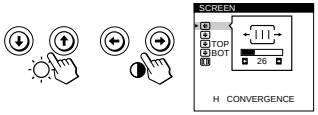
To reset, press the ⇢ (reset) button while the OSD is on. The selected item is reset to the factory settings.

Using the SCREEN On-screen Display

You can adjust convergence settings to eliminate red or blue shadows that may appear around objects on the screen. Adjust the CANCEL MOIRE function to eliminate wavy or elliptical patterns that may appear on the screen.
Once CANCEL MOIRE is adjusted, it will be stored in memory for the current input signal. All other adjustments will be stored in memory for all input signals received.

1 Press the ⊜ button.
The MENU OSD appears.

2 Press the ☼↓/↑ and ◑←/→ buttons to select " SCREEN," and press the ⊜ button again.
The SCREEN OSD appears.



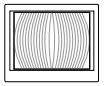
3 Press the ☼↓/↑ buttons to select the item you want to adjust.

Select	To
H CONVERGENCE	adjust the horizontal convergence
V CONVERGENCE	adjust the vertical convergence
TOP V CONVER TOP	adjust the screen's upper vertical convergence
BOT V CONVER BOTTOM	adjust the screen's lower vertical convergence

Select	To
CANCEL MOIRE *	turn the moire cancellation function "ON" or "OFF." CANCEL MOIRE must be "ON" for " ADJ (MOIRE ADJUST)" to appear on the screen.
ADJ MOIRE ADJUST	adjust the degree of moire cancellation

* Moire is a type of natural interference which produces soft or wavy lines on your screen. It may appear due to interference between the regulated pattern of the picture from the input signal and the phosphor pitch pattern of the CRT.

Example of moire:



4 Press the ◑←/→ buttons to adjust the settings.

For	Press
H CONVERGENCE	→ . . . to shift red shadows to the right and blue shadows to the left ← . . . to shift red shadows to the left and blue shadows to the right
V CONVERGENCE	→ . . . to shift red shadows up and blue shadows down ← . . . to shift red shadows down and blue shadows up
TOP V CONVER TOP	→ . . . to shift red shadows up and blue shadows down ← . . . to shift red shadows down and blue shadows up
BOT V CONVER BOTTOM	→ . . . to shift red shadows up and blue shadows down ← . . . to shift red shadows down and blue shadows up
CANCEL MOIRE	→ . . . to turn CANCEL MOIRE "ON" ← . . . to turn CANCEL MOIRE "OFF"
ADJ MOIRE ADJUST	→ or ← . . . to adjust the screen until the moire is at a minimum

Note
The picture may become fuzzy when CANCEL MOIRE is set to "ON."

The OSD automatically disappears after about 30 seconds. To close the OSD, press the ⊜ button again.

To reset, press the ⇢ (reset) button while the OSD is on. The selected item is reset to the factory setting.

EN

Using the OPTION On-screen Display

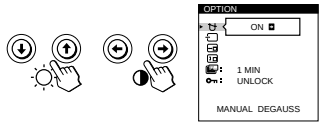
The OPTION OSD allows you to manually degauss the screen and adjust settings such as the OSD position and power saving delay time. It also allows you to lock the controls.

Degaussing the screen

The monitor screen is automatically degaussed (demagnetized) when the power is turned on.
You can also manually degauss the monitor.

1 Press the ⊜ button.
The MENU OSD appears.

2 Press the ☼↓/↑ and ◑←/→ buttons to select " OPTION," and press the ⊜ button again.
The OPTION OSD appears.



3 Press the ☼↓/↑ buttons to select " (MANUAL DEGAUSS)."

4 Press the ◑ → button.
The screen is degaussed for about 3 seconds.

If you need to degauss the screen a second time, wait for at least 20 minutes before repeating the steps above.

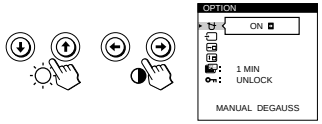
The OPTION OSD automatically disappears after about 30 seconds.
To close the OSD, press the ⊜ button again.

Changing the on-screen display position

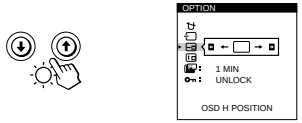
You can change the OSD position (for example, when you want to adjust the picture behind the OSD).

1 Press the ⊜ button.
The MENU OSD appears.

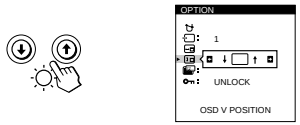
2 Press the ☼↓/↑ and ◑←/→ buttons to select " OPTION," and press the ⊜ button again.
The OPTION OSD appears.



3 Press the ☼↓/↑ buttons to select " (OSD H POSITION)" or " (OSD V POSITION)."
Select " (OSD H POSITION)" to adjust the horizontal position.



Select " (OSD V POSITION)" to adjust the vertical position.



4 Press the ◑←/→ buttons to move the OSD to the desired position.

The OPTION OSD automatically disappears after about 30 seconds.
To close the OSD, press the ⊜ button again.

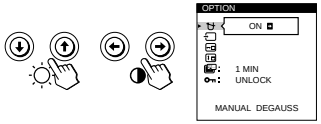
To reset, press the ⇢ (reset) button while the OSD is on.

Setting the power saving delay time

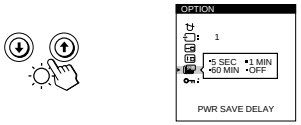
You can set the delay time before the monitor enters the power saving mode. See page 15 for more information on this monitor's power saving capabilities.

1 Press the ⊜ button.
The MENU OSD appears.

2 Press the ☼↓/↑ and ◑←/→ buttons to select " OPTION," and press the ⊜ button again.
The OPTION OSD appears.



3 Press the ☼↓/↑ buttons to select " (PWR SAVE DELAY)."



4 Press the ◑←/→ buttons to select the desired time.

When PWR SAVE DELAY is set to "OFF," the monitor does not go into power saving mode.

The OPTION OSD automatically disappears after about 30 seconds.
To close the OSD, press the ⊜ button again.

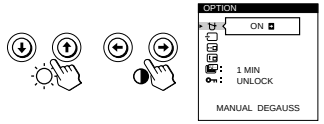
To reset, press the ⇢ (reset) button while the OSD is on.

Locking the controls

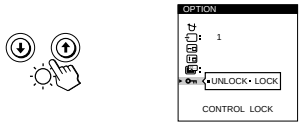
The control lock function disables all of the buttons on the front panel except the ⏻ (power) switch and ⊜ button.

1 Press the ⊜ button.
The MENU OSD appears.

2 Press the ☼↓/↑ and ◑←/→ buttons to select " OPTION," and press the ⊜ button again.
The OPTION OSD appears.



3 Press the ☼↓/↑ buttons to select " (CONTROL LOCK)."



4 Press the ◑←/→ buttons to select "LOCK."

The OPTION OSD automatically disappears after about 30 seconds.
To close the OSD, press the ⊜ button again.

Once you select "LOCK," you cannot select any items except "EXIT" and " OPTION" in the MENU OSD.
If you press any button other than the ⏻ (power) switch and ⊜ button, the mark appears on the screen.

To cancel the control lock

Repeat steps 1 through 3 above and press the ◑←/→ buttons to select "UNLOCK."

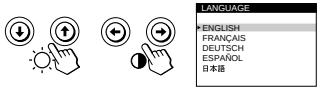
EN

Using the LANG (Language) On-screen Display

English, French, German, Spanish and Japanese versions of the OSDs are available.

1 Press the ⊜ button.
The MENU OSD appears.

2 Press the ☼↓/↑ and ◑←/→ buttons to select "🅰 LANG," and press the ⊜ button again.
The LANGUAGE OSD appears.



3 Press the ☼↓/↑ buttons to select the desired language.

ENGLISH: English, FRANÇAIS: French,
DEUTSCH: German, ESPAÑOL: Spanish,
or 日本語: Japanese.

The OSD automatically disappears after about 30 seconds. To close the OSD, press the ⊜ button again.

To reset to English, press the ⇢ (reset) button while the OSD is on.

Resetting the Adjustments

Resetting an adjustment item

1 Press the ⊜, ☼↓/↑ and ◑←/→ buttons to select the OSD containing the item you want to reset.

2 Press the ☼↓/↑ buttons to select the item you want to reset.

3 Press the ⇢ (reset) button.

Resetting all of the adjustment data for the current input signal

When there is no OSD displayed, press the ⇢ (reset) button.
All of the adjustments data for the current input signal is reset to the factory settings.
Note that adjustment data not affected by changes in input signal (OSD language, OSD position, input signal selection, power saving delay time and the control lock function) is not reset to the factory settings.

Resetting all of the adjustment data for all input signals

Press and hold the ⇢ (reset) button for more than two seconds.
All of the adjustment data, including the brightness and contrast, is reset to the factory settings.

Power Saving Function

This monitor meets the power-saving guidelines set by VESA and Energy Star, as well as the more stringent NUTEK .
If the monitor is connected to a computer or video graphics board that is VESA DPMS (Display Power Management Signaling) compliant, the monitor will automatically reduce power consumption in three stages as shown below.

You can set the delay time before the monitor enters the power saving mode using the OSD. Set the time according to "Setting the power saving delay time" on page 13.

Note
If no video signal is input to the monitor, the "NO INPUT SIGNAL" message (page 16) appears. After the delay time has passed, the power saving function automatically puts the monitor into the active-off mode and the ⏻ indicator lights up orange. Once the horizontal and vertical sync signals are detected, the monitor automatically resumes its normal operation mode.

	Power consumption mode	Screen	Horizontal sync signal	Vertical sync signal	Power consumption	Recovery time	⏻ indicator
1	Normal operation	active	present	present	≤ 140 W	—	Green
2	Standby (1st mode)	blank	absent	present	≤ 100 W	Approx. 3 sec.	Green and orange alternate
3	Suspend (2nd mode)	blank	present	absent	≤ 15 W	Approx. 3 sec.	Green and orange alternate
4	Active-off (3rd mode)	blank	absent	absent	< 5 W	Approx. 10 sec.	Orange
5	Power-off	—	—	—	0 W	—	Off

Preset Modes

No.	Resolution (dots × lines)	Horizontal Frequency	Vertical Frequency	Graphics Mode
1	640 × 480	31.5 kHz	60 Hz	VGA
2	640 × 480	43.3 kHz	85 Hz	VESA
3	800 × 600	53.7 kHz	85 Hz	VESA
4	1024 × 768	60.0 kHz	75 Hz	VESA
5	1024 × 768	68.7 kHz	85 Hz	VESA
6	1280 × 1024	80.0 kHz	75 Hz	VESA
7	1280 × 1024	91.1 kHz	85 Hz	VESA
8	1600 × 1200	93.8 kHz	75 Hz	VESA

Plug & Play

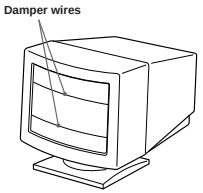
This monitor complies with the DDC™1, DDC2B, DDC2AB and DDC2B+ Display Data Channel (DDC) standards of VESA.
When a DDC1 host system is connected, the monitor synchronizes with the V. CLK in accordance with the VESA standards and outputs the EDID (Extended Display Identification Data) to the data line.
When a DDC2B, DDC2AB or DDC2B+ host system is connected, the monitor automatically switches to the appropriate standard.

DDC™ is a trademark of the Video Electronics Standard Association.

EN

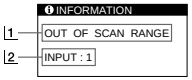
Damper Wires

When viewing a white background, very thin horizontal lines may be visible on the screen as shown below. These lines are the shadows of the damper wires and are characteristic of CRTs that use aperture grilles. The wires are attached to the aperture grille on the inside of the Trinitron tube and prevent the vibration of the aperture grille.



Warning Messages

If there is something wrong with the input signal, one of the following messages appears.



1 The input signal condition

"OUT OF SCAN RANGE" indicates that the input signal is not supported by the monitor's specifications.

"NO INPUT SIGNAL" indicates that no signal is input, or the input signal from the selected input connector is not received.

2 The selected input connector

Indicates which input connector is receiving the wrong signal. If there is something wrong with the signal from both input connectors, "1" (HD15) and "2" (13W3) are displayed alternately.

To solve these problems, see "Troubleshooting" below.

Troubleshooting

This section may help you isolate the cause of a problem and as a result, eliminate the need to contact technical support.

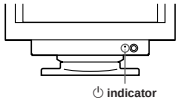
Symptom	Check these items
No picture	
If the ⏻ indicator is not lit	• Check that the power cord is properly connected. • Check that the ⏻ (power) switch is in the "on" position.
If the "NO INPUT SIGNAL" message appears on the screen, or if the ⏻ indicator is either orange or alternating between green and orange	• The screen is blank when the monitor is in power saving mode. Try pressing any key on the computer keyboard. • Check that your computer power switch is in the "on" position. • Check that the input select setting is correct. • Check that the video signal cable is properly connected and all plugs are firmly seated in their sockets. • Ensure that no pins are bent or pushed in the HD15 or 13W3 video input connector. • Check that the video board is completely seated in the proper bus slot.
If the "OUT OF SCAN RANGE" message appears on the screen	• Check that the video frequency range is within that specified for the monitor. (Horizontal: 30 – 94 kHz, Vertical: 50 – 160 Hz) Refer to your computer's instruction manual to adjust the video frequency range. • If you are using a video signal cable adapter, check that it is correct.
If no message is displayed and the ⏻ indicator is green or flashing orange	• See "Self-diagnosis Function" (page 18).
Picture is scrambled	• Check your graphics board manual for the proper monitor setting. • Check this manual and confirm that the graphics mode and the frequency you are trying to operate at is supported. Even if the frequency is within the proper range, some video boards may have a sync pulse that is too narrow for the monitor to sync correctly.
Color is not uniform	• Degauss the monitor (page 12). If you place equipment which generates a magnetic field, such as a loudspeaker, near the monitor, or you change the direction of the monitor, color may lose uniformity. The degauss function demagnetizes the metal frame of the CRT to obtain a neutral field for uniform color reproduction. If a second degauss cycle is needed, allow a minimum interval of 20 minutes for the best result.

Symptom	Check these items
You cannot adjust the monitor with the buttons on the front panel	• If the control lock function is set to on, set it to off using the OPTION OSD (page 13).
White does not look white	• Adjust the color temperature (page 10).
Screen image is not centered or sized properly	• Press the 💬 button (page 5). • Adjust the size or centering (pages 7 – 8). • Some video modes do not fill the screen to the edges. This problem tends to occur with certain video boards.
Edges of the image are curved	• Adjust the geometry (pages 8 – 9).
White lines show red or blue shadows at edges	• Adjust the convergence (pages 10 – 11).
Picture is fuzzy	• Adjust the contrast and brightness (page 6). • Degauss the monitor (page 12). If you place equipment which generates a magnetic field, such as a loudspeaker, near the monitor, or you change the direction of the monitor, color may lose uniformity. The degauss function demagnetizes the metal frame of the CRT to obtain a neutral field for uniform color reproduction. If a second degauss cycle is needed, allow a minimum interval of 20 minutes for the best result. • If red or blue shadows appear along the edges of images, adjust the convergence (pages 10 – 11). • If the moire is cancelled, the picture may become fuzzy. Decrease the moire cancellation effect (pages 10 – 11).
Picture bounces or has wavy oscillations	• Isolate and eliminate any potential sources of electric or magnetic fields. Common causes for this symptom are electric fans, fluorescent lighting or laser printers. • If you have another monitor close to this monitor, increase the distance between them to reduce the interference. • Try plugging the monitor into a different AC outlet, preferably on a different circuit. • Try the monitor on a different computer in a different room.
Picture is flickering	• Set the refresh rate on the computer to obtain the best possible picture by referring to the computer's manual.
Picture appears to be ghosting	• Eliminate the use of video cable extensions and/or video switch boxes if this symptom occurs. Excessive cable length or a weak connection can produce this symptom.
Wavy or elliptical (moire) pattern is visible	• Cancel the moire (pages 10 – 11). The moire may be modified depending on the connected computer. • Due to the relationship between resolution, monitor dot pitch and the pitch of some image patterns, certain screen backgrounds sometimes show moire. Change your desktop pattern.
Two fine horizontal lines (wires) are visible	• These wires stabilize the vertically striped aperture grille (page 15). This aperture grille allows more light to pass through to the screen giving the Trinitron CRT more color and brightness.
Hum is heard right after the power is turned on	• When the power is turned on, the auto-degauss cycle is activated. While the auto-degauss cycle is activated (3 seconds), a hum may be heard. The same hum is heard when the monitor is manually degaussed. This is not a malfunction.

EN

Self-diagnosisFunction

This monitor is equipped with a self-diagnosis function. If there is a problem with your monitor or computer(s), the screen will go blank and the ⏻ indicator will either light up green or flash orange.



If the ⏻ indicator is green

1 **Remove any plugs from the video input 1 and 2 connectors, or turn off the connected computer(s).**

2 **Press and hold the ◑→ button for 2 seconds.**

If all four color bars appear (white, red, green, blue), the monitor is working properly. Reconnect the video input cables and check the condition of your computer(s).

If the color bars do not appear, there is a potential monitor failure. Inform your service representative of the monitor's condition.

If the ⏻ indicator is flashing orange

Press the ⏻ button to turn the monitor off and on.

If the ⏻ indicator lights up green, the monitor is working properly.

If the ⏻ indicator is still flashing, there is a potential monitor failure. Count the number of seconds between orange flashes of the ⏻ indicator and inform your service representative of the monitor's condition. Be sure to note the model name and serial number of your monitor. Also note the make and model of your computer and video board.

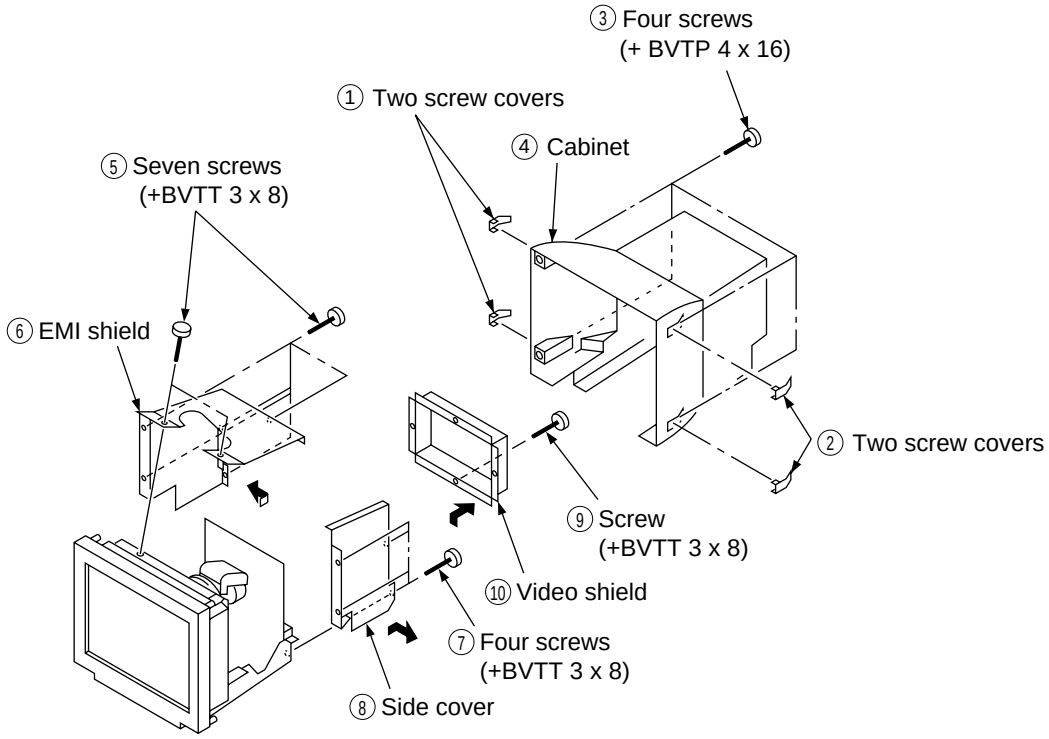
Specifications

Picture tube	0.25 – 0.27 mm aperture grille pitch 19 inches measured diagonally 90-degree deflection
Viewable image size	Approx. 365 × 273 mm (w/h) (14 3/8 × 10 3/4 inches) 18.0″ viewing image
Resolution	Horizontal: Max. 1600 dots Vertical: Max. 1200 lines
Standard image area	Approx. 330 × 264 mm (w/h) (13 × 10 1/2 inches) or Approx. 352 × 264 mm (w/h) (13 7/8 × 10 1/2 inches)
Deflection frequency	Horizontal: 30 to 94 kHz Vertical: 50 to 160 Hz 256 < Total Line < 2048
AC input voltage/current	100 to 240 V, 50 – 60 Hz, 1.8 – 1.0 A
Power consumption	Max. 130 W
Dimensions	462.2 × 477.5 × 475.5 mm (w/h/d) (18 1/4 × 18 7/8 × 18 3/4 inches)
Mass	Approx. 25 kg (55 lb 2 oz)

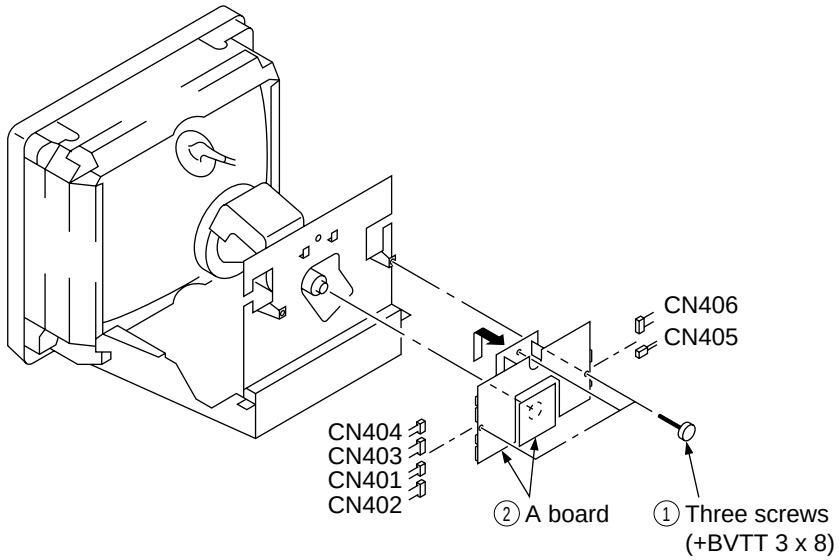
Design and specifications are subject to change without notice.

SECTION 2
DISASSEMBLY

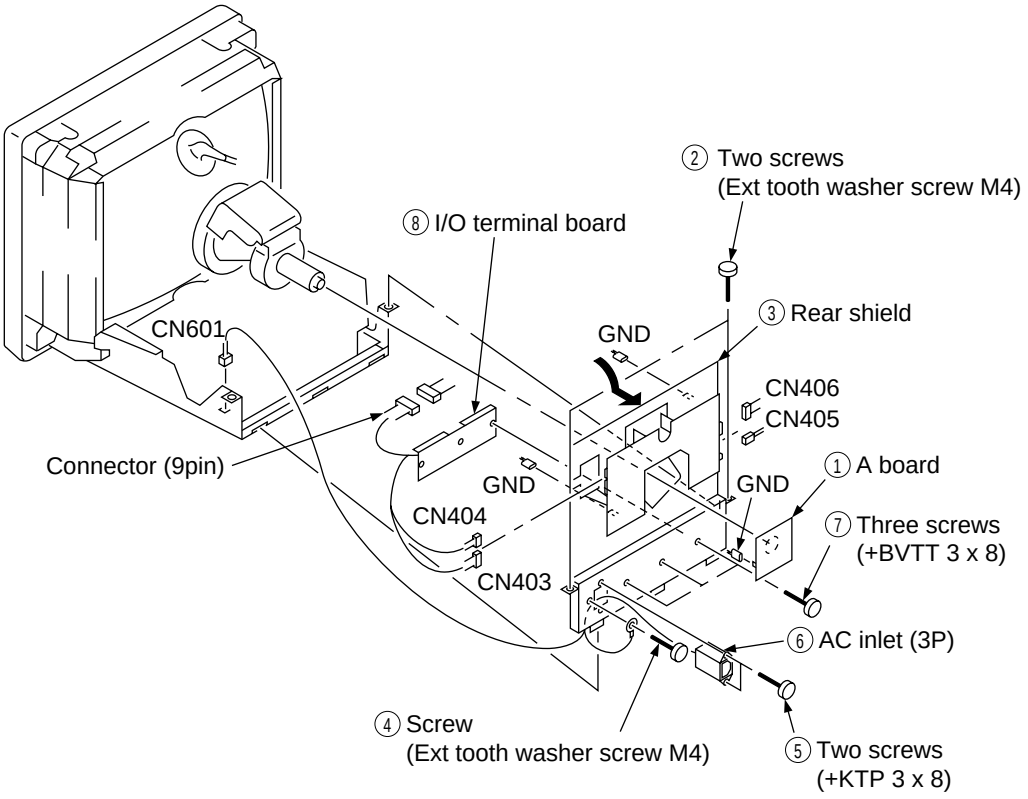
2-1. CABINET REMOVAL



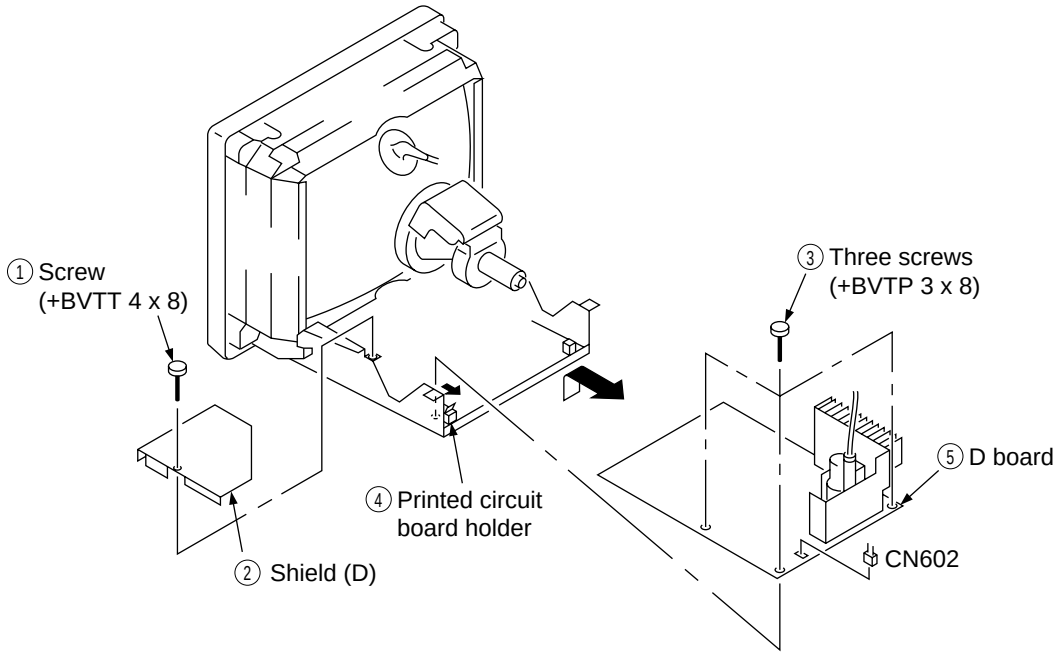
2-2. A BOARD REMOVAL



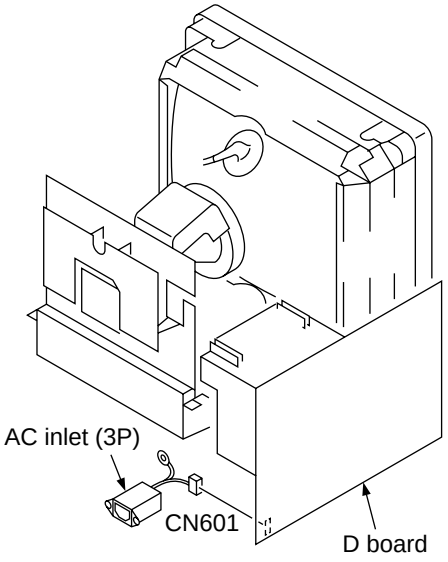
2-3. AC INLET AND I/O TERMINAL BOARD REMOVAL



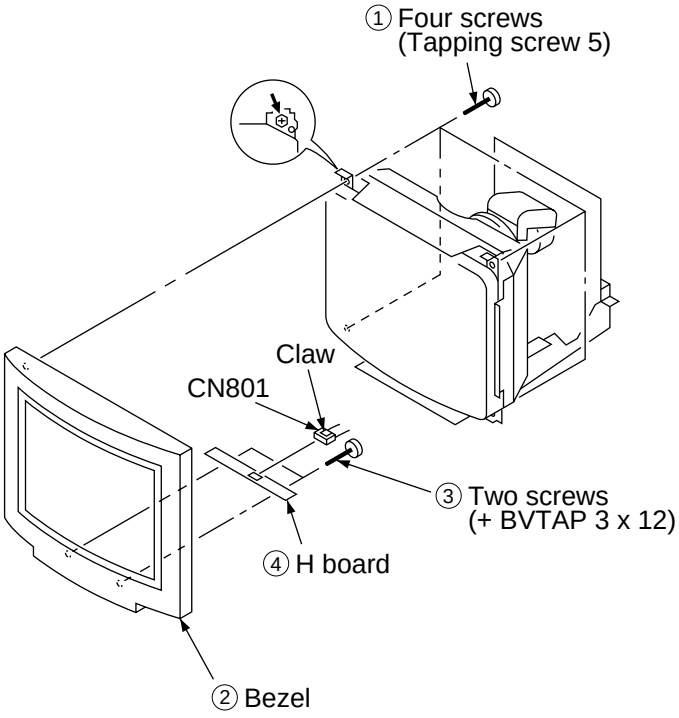
2-4. D BOARD REMOVAL



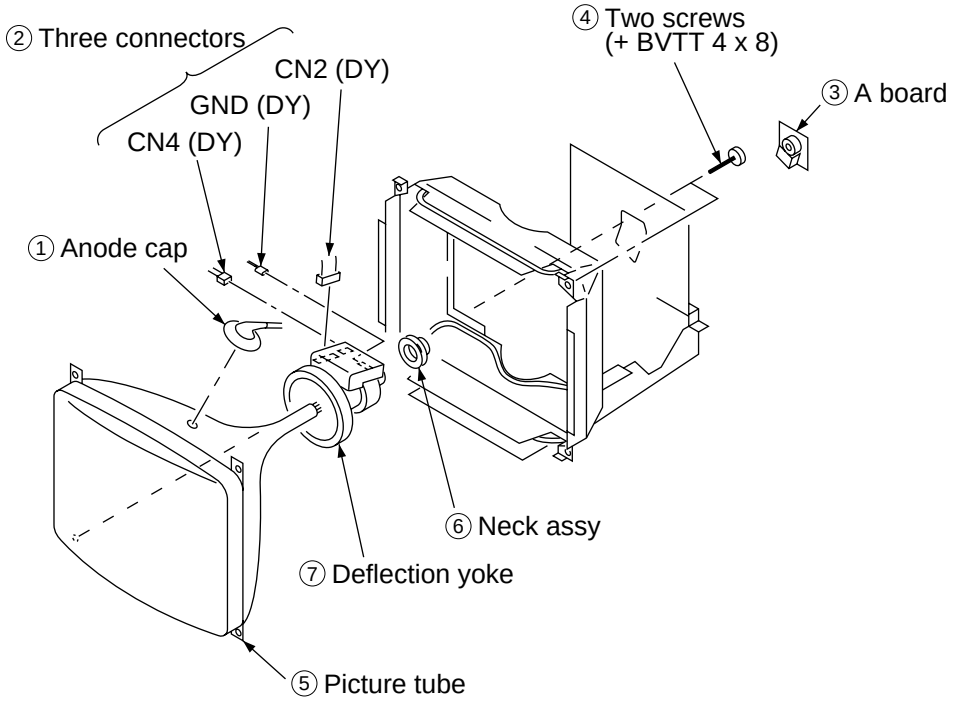
2-5. SERVICE POSITION



2-6. H BOARD REMOVAL



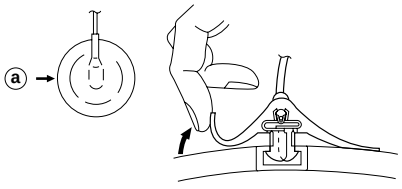
2-7. PICTURE TUBE REMOVAL



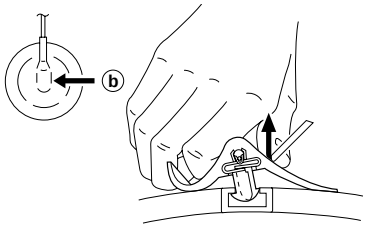
• REMOVAL OF ANODE-CAP

NOTE: Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon painted on the CRT, after removing the anode.

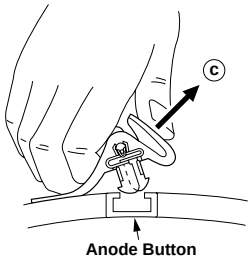
• REMOVING PROCEDURES



① Turn up one side of the rubber cap in the direction indicated by the arrow ⓐ.



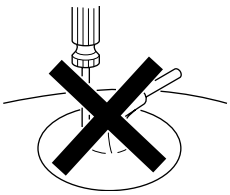
② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ⓑ.

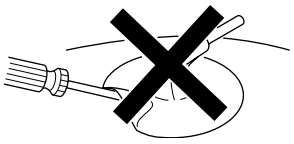


③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow ⓒ.

• HOW TO HANDLE AN ANODE-CAP

① Don't hurt the surface of anode-caps with shartp shaped material!
② Don't press the rubber hardly not to hurt inside of anode-caps! A material fitting called as shatter-hook terminal is built in the rubber.
③ Don't turn the foot of rubber over hardly! The shatter-hook terminal will stick out or hurt the rubber.





SECTION 3
SAFETY RELATED ADJUSTMENT

When replacing or repairing the shown below table, the following operational checks must be performed as a safety precaution against X-rays emissions from the unit.

	Part Replaced (⧓)
HV ADJ	RV901

	Part Replaced (◪)
HV Regulator Circuit	D board IC901, R903, R922, T901, RV901 • Mounted D board
HV HOLD DOWN Circuit	D board D913, D916, C923, R920, R927, R935, R936, T901 • Mounted D board
Beam Current Protector Circuit	D board IC901, D901, D902, D918, R053, R918, R923, R928, R932, R933, R934, R939, T901 • Mounted D board

* Confirm one minute later turning on the power.

• HV Protector Circuit Check

(1) Confirm that the voltage between cathode of D913 and GND is more than 17.5 V DC.

(2) Using external DC Power Supply, apply the voltage shown below between cathode of D913 and GND, and confirm that the HV HOLD DOWN circuite works. (TV Raster disappears)

Standard voltage: Less than 23.40 V DC

• Beam Current Protector Circuite Check

(1) Hardware logic circuit

- Turn the POWER SW on, and check that the RASTER fades in.
- Connect a variable resistor (20 kΩ or more) and an ammeter in series between FBT pin ⑪ and – 15 V line (– side of C637). Decrease gradually the resistance of the variable resistor from maximum to minimum, and confirm that the Beam Current Protector Circuite works (TV Raster disappears). The current must be within the range shown below.

  Standard current: Less than 1.09 mA

(2) Software logic circuit

- Turn the POWER SW on, and check that the RASTER fades in.
- Short between + of C639 and GND.
- Connect a variable resistor (20 kΩ or more) and an ammeter in series between FBT pin ⑪ and – 15 V line (– side of C637). Decrease gradually the resistance of the variable resistor form maximum to minimum, and confirm that the Beam Current Protector Circuite works (TV Raster disappears). The current must be within the range shown below.

  Standard current: Less than 1.14 mA

SECTION 4
ADJUSTMENTS

- **Landing Rough Adjustment**

1. Enter the full white signal. (or the full black dots signal).
2. Adjust the contrast to the maximum.
3. Make the screen monogreen.

Note: Off the outputs from R ch and B ch of SG.

4. Reverse the DY, and adjust coarsely the purity magnet so that a green raster positions in the center of screen.
5. Adjust the tilt of DY, and fix lightly with a clamp.

Note: "TILT" shall be set at 128.

- **Landing Fine Adjustment**

1. Put the set inside the Helmholtz coil.
2. Input the single green signal and set the "CONTRAST" to MAX.

<Landing adjustment luminance>

Landing adjustment after 2 hours of aging by Landing adjustment luminance.

*Landing adjustment luminance
:same luminance on aging (Reference: SIK=250uA)

*Max luminance
: 110 ch/m SIK=750uA

3. Demagnetize the metal part of the chassis with the hand degausser and coil degausser, and the CRT surface with the hand degausser.
   Input AC 230V to AC IN, turn on and off the power to perform auto degaussing. (Perform auto degaussing by setting "MON CON REG2"=152. Return to the original value after use.)
   Demagnetize the CRT surface with the hand degausser again.

Note:
(1) Adjust in a non-magnetic field. BV=45uT.
(2) If adjusting in a magnetic fields, add the shift from the non-magnetic field in your estimation.

4. Attach the wobbling coil to the designated part of the CRT neck.
5. Pull the TLH plate nooked on stopper.
6. Attach the sensor of the landing adjustment unit on the CRT surface.
7. Adjust the DY position and purity, and the DY tilt, and landing of the center and 4 corners with the landing checker.
   Purity Adjustment use 2-pole magnet on DY side, Don't use on Neck Assy one.

<Specifications>

Adjust so that the green is within the specification given right.
4 corner adjust target : within ± 1

(μm)

0 ± 4	0 ± 7.5	0 ± 4
0 ± 4	0 ± 5	0 ± 4
0 ± 4	0 ± 7.5	0 ± 4

The red and blue must be within the specification given right with respect to the green.

(μm)

± 5	± 5	± 5
± 5	± 5	± 5
± 5	± 5	± 5

A difference between red and blue must be within the specification given right.

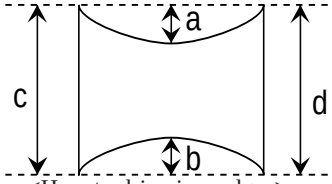
(μm)

8	8	8
8	7	8
8	8	8

* Adjustment and measurement should be made at the points one inch inside the fluorescent screen.

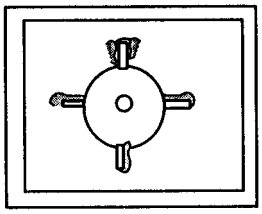
8. Tighten DY screw.
   Torque: 22±2 kgcm (2.2±0.2 Nm)
   Auto-degauss it.
9. Adjustment each top and bottom pins by switching DY neck up-down, and adjust V. TILT and horizontal trapezoid by swinging DY neck right-left. And then fix with 4 wedges. (Insert wedge certainly so that the DY will not loosen.)

Fixing DY with wedges.



"a" and "b" must be equal, and "c" and "d" must be almost equal.

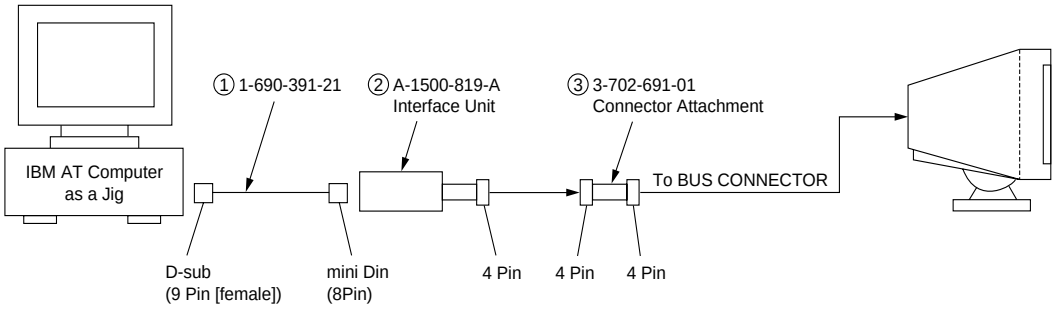
<How to drive in wedges>



Apply a locking agent to the upper wedges only.
In such a case, apply agent so that it enters both sides of wedge and also inside the DY.

10. Check landing at each corner and in case not in specification, adjust by sticking disk magnets on CRT funnel. (After placing disk magnets, absolutely hand degauss and check the results.)
11. Remove the sensor and wobbling coil.
12. Check that the DY is not tilting. Then, fix purity magnets with white paint and fix wedge with RTV.

Connect the communication cable of the computer to the connector located on the D board on the monitor. Run the service software and then follow the instruction.



*The parts above (① ~ ③) are necessary for DAS adjustment.

- **Convergence Rough Adjustment**

(1) Receive an image of the white crosshatch signals (white lines on black).
(2) Place the protrusions of the 6-fold poles magnet attached to the CRT neck upon each other. (Fig. 1)
(3) Make rough adjustment of the H and V direction convergence by using 4-fold poles magnet.

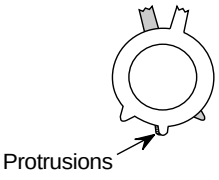
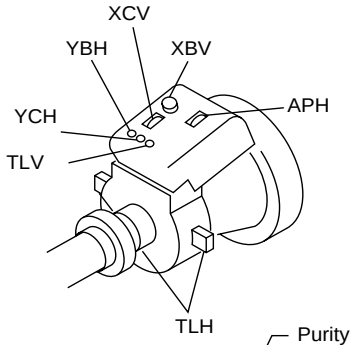


Fig. 1



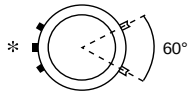
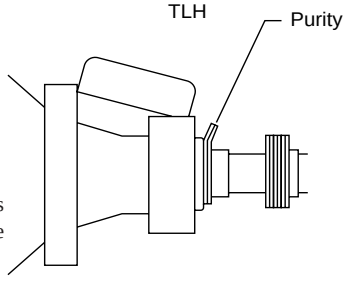
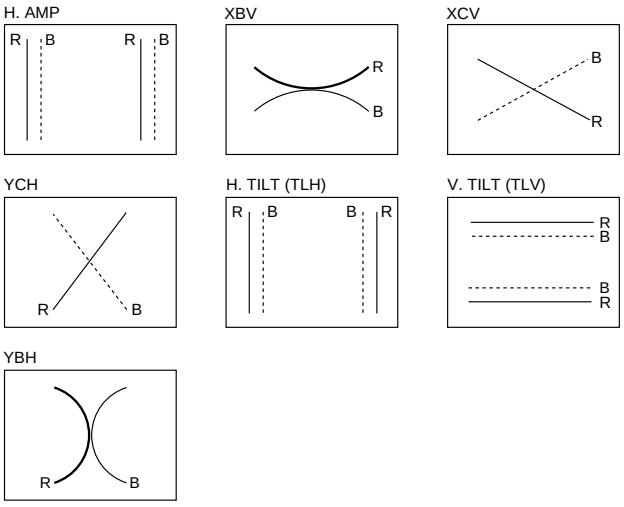


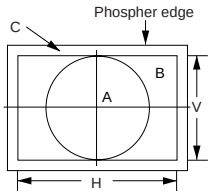
Fig. 3

* Set so that the protruding parts of the 2 magnet rings agree with each other.





- **Convergence Specification**

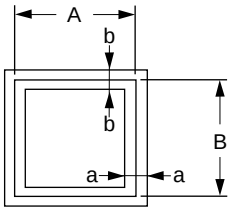


MODE	Zone	N. Hemisphere	S. Hemisphere
fH≥ 60 kHz	A Zone	≤0.3 mm	≤0.3 mm
	B Zone	≤0.3 mm	≤0.4 mm
	C Zone	≤0.4 mm	≤0.45 mm
fH< 60 kHz	A Zone	≤0.3 mm	≤0.35 mm
	B Zone	≤0.4 mm	≤0.45 mm
	C Zone	≤0.45 mm	≤0.5 mm

- **White Balance Adjustment Specification**

(1) COLOR INDEX = 3
x = 0.283 ± 0.02
y = 0.298 ± 0.02
(All White)
(2) COLOR INDEX = 2
x = 0.313 ± 0.02
y = 0.329 ± 0.02
(All White)
(3) COLOR INDEX = 1
x = 0.346 ± 0.02
y = 0.359 ± 0.02
(All White)

- **Vertical and Horizontal Position and Size Specification**

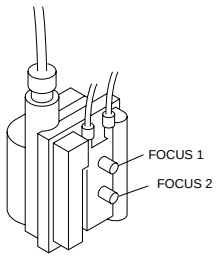


a ≦ 2.6 mm
b ≦ 2.6 mm

MODE	Other	6, 8
A	352 mm	330 mm
B	264 mm	264 mm

- **Focus adjustment**

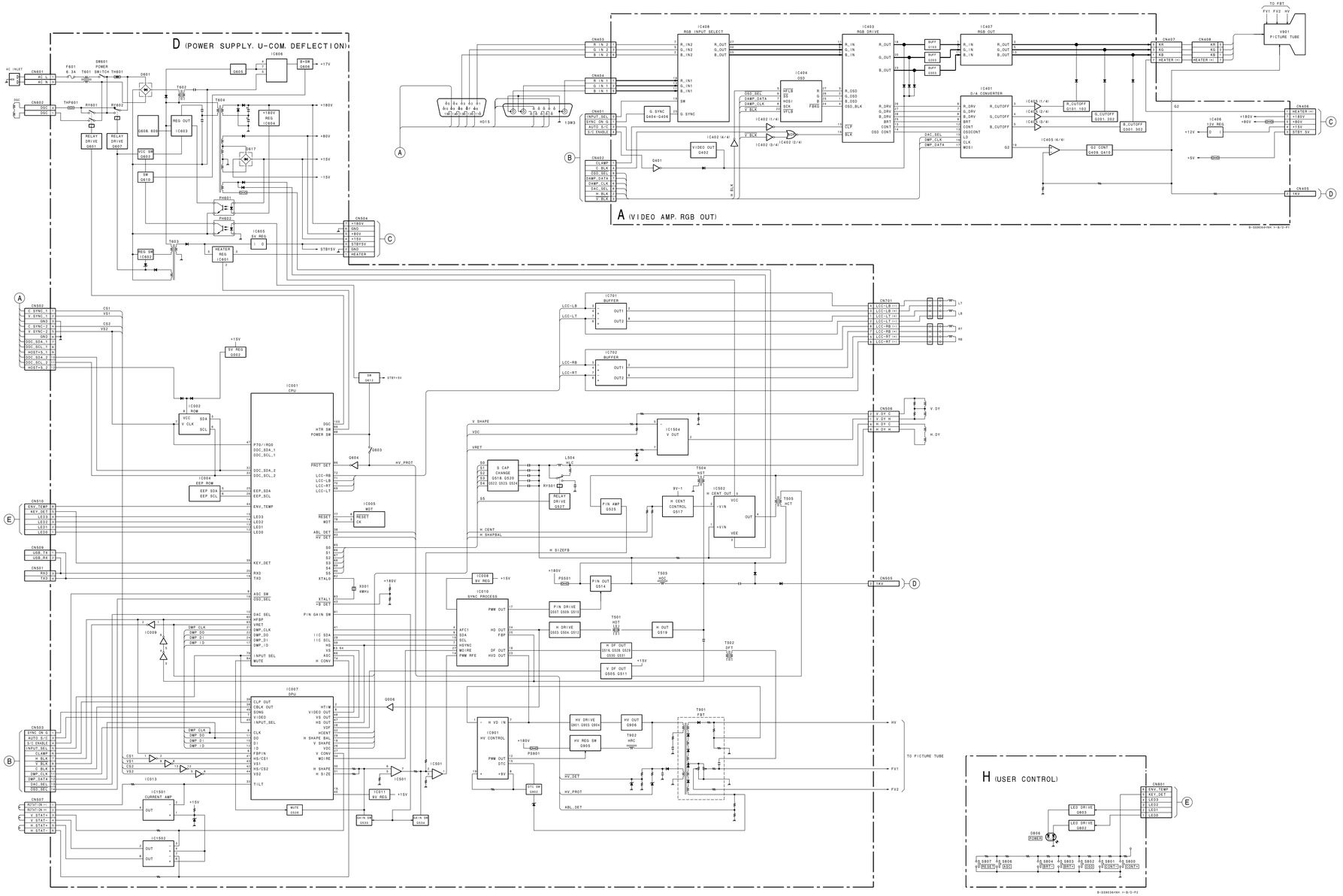
Adjust the focus volume 1 and 2 for the optimum focus.



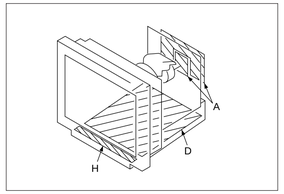
MEMO

SECTION 5
DIAGRAMS

5-1. BLOCK DIAGRAMS (with FRAME SCHEMATIC DIAGRAM)



5-2. CIRCUIT BOARDS LOCATION



- All voltages are in V.
- Readings are taken with a 10 M digital multimeter.
- Readings are taken with a color-bar signal input.
- Voltage variations may be noted due to normal production tolerances.
- ∗ : Can not be measured.
- Circled numbers are waveform references.
- —— : B + bus.
- - - - : B – bus.

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note: Les composants identifiés par un tramé et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

5-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

Note:

- All capacitors are in µF unless otherwise noted. (pF: µµF) Capacitors without voltage indication are all 50 V.
- Indication of resistance, which does not have one for rating electrical power, is as follows.

  Pitch: 5 mm
  Rating electrical power 1/4 W (CHIP : 1/10 W)

- All resistors are in ohms.
- : nonflammable resistor.
- : fusible resistor.
- △ : internal component.
- : panel designation, and adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- : earth-ground.
- : earth-chassis.
- The components identified by [ ] in this basic schematic diagram have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.
- When replacing components identified by], make the necessary adjustments indicated. (See page 3-1)
- When replacing the part in below table, be sure to perform the related adjustment.

	Part replaced (H)
HV ADJ	RV901

	Part replaced (◪)	
HV Regulator Circuit	D board	IC901, R903, R922, T901, RV901 • Mounted D board
HV HOLD DOWN Circuit	D board	D913, D916, C923, R920, R927, R935, R936, T901 • Mounted D board
Beam Current Protector Circuit	D board	IC901, D901, D902, D918, R053, R918, R923, R928, R932, R933, R934, R939, T901 • Mounted D board

Terminal name of semiconductors in silk screen printed circuit (☆)

	Device	Printed symbol	Terminal name	Circuit
①	Transistor	T	Collector / Base / Emitter	
②	Transistor	—	Collector / Base / Emitter	
③	Diode	⊓	Cathode / Anode	
④	Diode	T	Cathode / Anode (NC)	
⑤	Diode	—	Cathode / Anode (NC)	
⑥	Diode	T	Common / Anode / Cathode	
⑦	Diode	—	Common / Anode / Cathode	
⑧	Diode	T	Common / Anode / Anode	
⑨	Diode	—	Common / Anode / Anode	
⑩	Diode	T	Common / Cathode / Cathode	
⑪	Diode	—	Common / Cathode / Cathode	
⑫	Diode	▌	Anode Cathode / Anode Anode / Cathode Anode	
⑬	Transistor (FET)	▌	Drain / Source / Gate	
⑭	Transistor (FET)	⊢	Drain / Source / Gate	
⑮	Transistor (FET)	▌	□ Source / □ Drain / □ Gate	
⑯	Transistor	▌	□ Emitter / □ Collector / □ Base	
–	Discrete semiconductor			

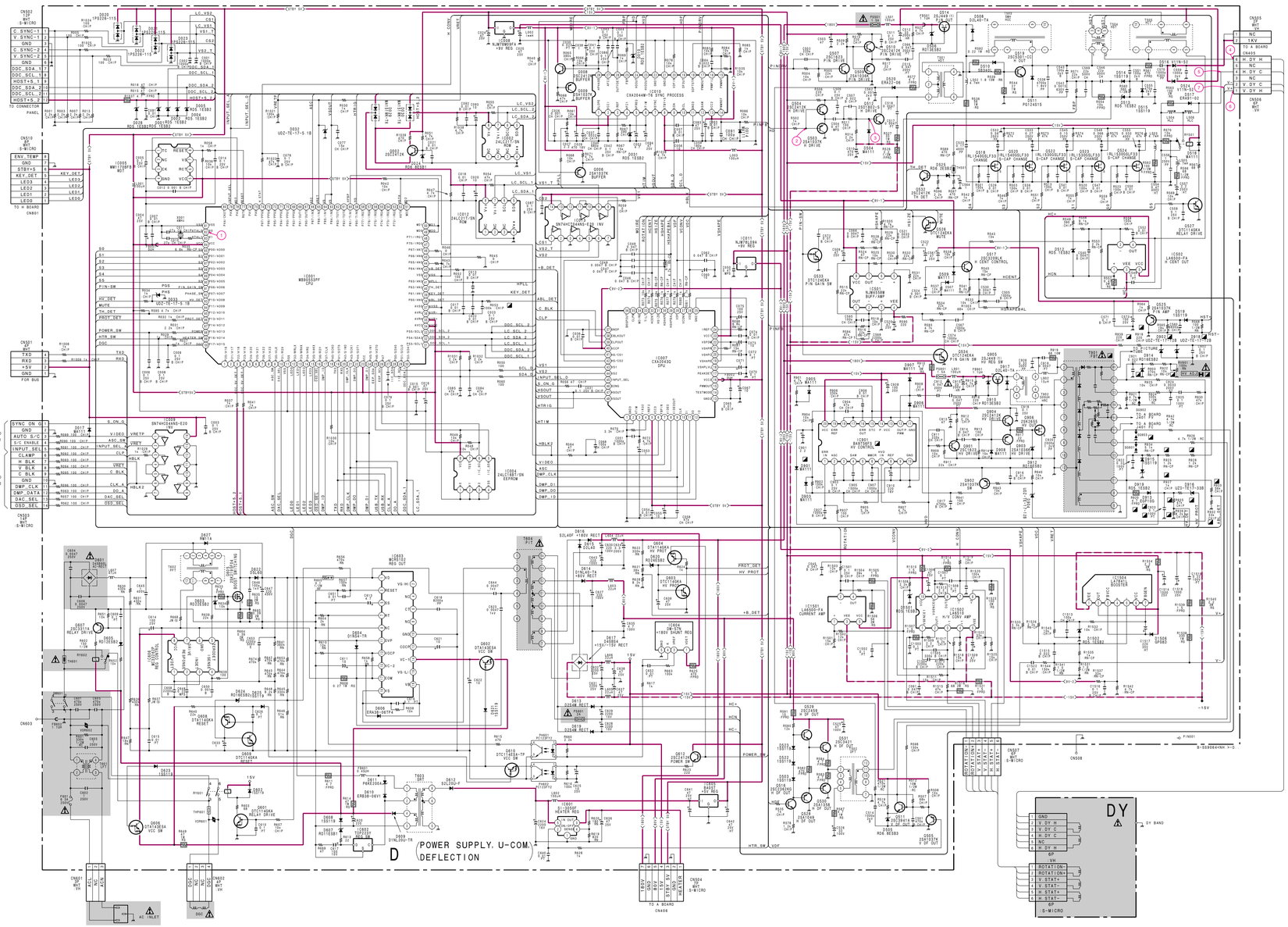
(Chip semiconductors that are not actually used are included.)

VW-15

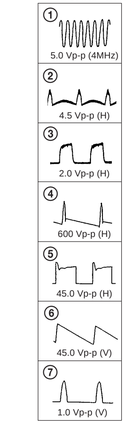
(1) Schematic Diagram of D Board

• D BOARD VOLTAGE LIST

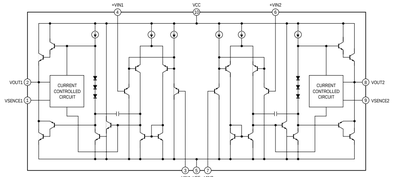
Ref.	Pin No.	Voltage [V]
IC002	5	0.5
	6	3.5
	7	0
IC004	5	4.9
	6	4.9
	7	0
IC005	1	0.4
	3	0
	7	1.5
	8	4.9
IC009	1	−0.5
	2	0
	3	0
	4	4.4
	5	4.4
	6	0.5
	14	4.9
IC010	1	3.8
	3	+
	4	2.6
	5	2.8
	6	5.0
	7	0.3
	9	4.9
	10	4.9
	12	4.4
	14	4.3
	15	4.3
	16	5.0
	17	2.0
	18	−0.2
	19	5.2
	20	8.6
	23	1.2
	24	2.3
	25	0
	26	3.6
	27	4
	28	4.5
IC012	5	0.6
	6	3.5
	7	4.0
IC013	1	0
	2	5.0
	3	4.0
	4	0
	8	0.3
	9	3.8
	10	4.9
	11	0
IC501	1	4.3
	2	0
	3	0
	5	0
	6	0
	7	−9.8
IC502	1	76.1
	2	76.2
	4	75.6
IC601	2	5.2
	3	6.6
	4	5.2
	5	8.0
IC602	D	412.0
	C	6.0
IC603	1	147.5
	3	3.9
	5	4.5
	6	2.2
	7	3.8
	9	0
	11	0
	12	0
	13	0
	14	16.3
	15	10.6
	17	0
	18	88.5
	19	78.2
IC604	1	179.8
	3	2.5
	4	12.6
IC606	1	2.7
	2	2.6
	3	1.4
	4	0.2
	5	2.5
	7	10.9
IC701	1	−0.3
	2	−0.5
	3	1.3
	4	1.3
	6	1.3
	7	1.3
	8	−1.3
	9	−1.3
IC702	1	0.8
	2	0.8
	3	1.3
	4	1.3
	6	1.3
	7	1.3
	8	1.6
	9	1.6
IC901	1	9.0
	2	5.3
	4	0
	6	1.1
	7	1.1
	8	9.0
	12	0
	15	0.2
	16	7.8
	19	8.9
IC1501	1	2.8
	2	2.8
	4	−1.3
IC1502	1	0.1
	2	0.1
	3	3.5
	4	3.5
	6	1.8
	7	1.8
	8	0.6
	9	0.6
IC1504	2	0.4
	3	14.0
	4	1.3
	5	1.3
	7	−13.3
PH601	1	14.7
	2	13.6
	3	0
	4	3.8
PH602	1	1.0
	2	0
	3	0
	4	2.6
Q001	B	0
	C	3.7
Q002	B	5.5
	C	14.6
	E	4.8
Q003	B	0
	E	0.2
Q004	B	4.9
	E	4.2
Q006	B	2.6
	E	3.2
Q005	B	4.9
	C	0.1
Q007	B	7.2
	C	0
Q008	B	2.3
	E	2.8
Q503	B	2.3
	E	2.3
Q504	B	2.3
	C	13.5
	E	2.3
Q505	B	3.5
	E	7.0
Q507	B	0.2
	C	8.4
Q509	B	8.4
	E	8.2
Q510	B	8.4
	C	14.2
	E	8.2
Q511	B	7.5
	C	*
	E	7.0
Q512	B	−14.3
	C	−0.1
	E	−14.3
Q514	G	175.8
	D	76.8
	S	180.1
Q516	B	5.2
	C	42.4
	E	4.6
Q517	B	4.9
	C	70.9
	E	4.4
Q518	G	0
	D	31.2
Q519	B	−0.9
	C	76.5
Q520	G	4.8
	D	0
Q521	B	4.3
	E	3.8
Q522	G	4.9
	D	0
Q523	G	4.8
	D	0
Q524	G	4.8
	D	0
Q525	B	4.8
	E	5.4
Q526	B	0
	C	3.1
Q527	B	4.9
	C	0.4
Q528	B	42.4
	E	43.0
Q529	B	44.3
	C	74.3
	E	43.7
Q530	B	43.0
	C	43.3
Q531	B	43.7
	C	74.3
	E	43.4
Q532	B	0
	C	4.9
Q533	B	5.2
	C	0
Q534	B	5.1
	C	0
Q601	B	0
	C	14.7
Q602	B	2.7
	C	16.4
	E	16.8
Q603	B	0
	C	2.5
Q604	B	2.5
	C	0
	E	2.5
Q605	G	10.8
	D	96.0
	S	0.2
Q606	B	1.1
	C	16.8
	E	16.8
Q607	B	0.8
	C	0.1
	E	0
Q608	B	6.2
	C	0
	E	6.2
Q609	B	0
	C	6.2
Q610	B	5.7
	C	0.5
	E	0.5
Q612	B	5.0
	E	4.3
Q901	B	0.1
	C	8.8
Q902	B	9.3
	C	0
	E	9.3
Q903	B	7.8
	E	7.6
Q904	B	7.6
	C	14.0
	E	7.6
Q905	G	177.3
	D	60.2
	S	179.8
Q906	G	7.6
	D	60.5



• D BOARD WAVEFORMS



• D BOARD IC1502 LA6510



• D BOARD SEMICONDUCTOR LOCATION

IC

	(Conductor Side)	(Component Side)
IC001		A–2
IC002		A–2
IC004		A–2
IC005		B–2
IC007		A–3
IC008	A–1	A–5
IC009		A–2
IC010		A–5
IC011	B–3	B–3
IC012		A–3
IC013		A–3
IC501		A–5
IC502	C–2	C–4
IC601	B–5	B–1
IC602	C–5	C–1
IC603	C–4	C–1
IC604	F–3	F–3
IC605	B–4	B–2
IC606	D–5	D–1
IC901		F–3
IC1501	A–4	A–1
IC1502	A–5	A–1
IC1504	C–1	C–5

TRANSISTOR

	(Conductor Side)	(Component Side) *
Q002		A–3 ②
Q006	A–1	①
Q008	A–1	①
Q009		A–5 ②
Q503	A–1	①
Q504	A–1	①
Q505		D–3 ②
Q507		B–5 ②
Q509	B–1	①
Q510	B–1	①
Q511	E–3	E–3 –
Q512	G–1	G–5 –
Q514	C–1	C–5 –
Q516	D–3	D–3 –
Q517	C–3	C–3 –
Q518	A–2	A–4 –
Q519	E–1	E–5 –
Q520	A–2	A–4 –
Q522	B–2	B–4 –
Q523	B–1	B–5 –
Q524	B–2	B–4 –
Q525	E–2	①
Q526		A–4 ②
Q527	B–3	①
Q528	D–3	D–3 –
Q529	D–3	D–3 –
Q530	D–3	D–3 –
Q531	D–3	D–3 –
Q532	A–2	①
Q533		A–4 ②
Q534		A–4 ②
Q601	G–3	①
Q602	C–5	C–1 –
Q603	B–4	①
Q604	B–4	①
Q605	E–5	E–1 –
Q606	C–5	C–1 –
Q607	E–4	E–2 –
Q608	C–5	①
Q609	C–5	①
Q610	C–4	C–2 –
Q612	B–4	①
Q901	F–3	①
Q902	E–3	①
Q903	F–3	①
Q904	F–3	①
Q905	G–3	G–1 –
Q906	G–2	G–4 –

DIODE

	(Conductor Side)	(Component Side) *
D001	A–3	A–3 –
D002	A–3	A–3 –
D004	A–3	A–3 –
D005	A–3	A–3 –
D010	A–1	A–5 –
D014		A–5 ②
D017		A–2 ②
D020		A–4 ②
D021		A–4 ②
D022		A–4 ②
D023		A–4 ②
D024	A–3	A–3 –
D027	A–3	A–3 –
D028	A–3	A–3 –
D029	A–3	④
D030	A–4	④
D031	A–1	A–5 –
D032		A–2 ②
D033	B–4	③
D034	D–3	D–3 –
D502	G–1	①
D504	G–1	①
D505	E–3	E–3 –
D506	C–1	C–5 –
D508	D–1	D–5 –
D509	C–2	①
D510	F–1	F–5 –
D511	E–1	E–5 –
D512	C–3	C–3 –
D513	E–1	E–5 –
D514	E–1	E–5 –
D515	E–1	E–5 –
D516	D–1	D–5 –
D517	D–2	D–4 –
D518	B–3	①
D519	E–1	E–5 –
D520	D–2	D–3 –
D522	D–3	D–3 –
D523	D–3	D–3 –
D524	D–1	D–5 –
D525	A–2	A–4 –
D601	F–4	F–2 –
D602	G–3	G–2 –
D603	E–5	E–1 –
D604	D–5	D–1 –
D605	E–4	E–2 –
D606	C–5	C–1 –
D607	C–5	C–1 –
D608	C–5	C–1 –
D609	C–5	C–1 –
D610	C–4	C–1 –
D611	C–5	C–1 –
D612	B–5	B–1 –
D613	C–3	E–3 –
D614	E–3	E–3 –
D615	E–3	E–3 –
D616	E–3	E–3 –
D617	C–3	C–2 –
D619	C–3	C–3 –
D620	B–4	B–2 –
D621	C–5	C–1 –
D622	D–4	F–2 –
D623	C–5	C–1 –
D624	C–5	C–1 –
D625	C–5	C–1 –
D627	E–4	E–2 –
D901		E–3 ③
D902		E–3 ③
D903	E–3	③
D904		E–3 ③
D905		E–3 ③
D906		E–3 ③
D907		E–3 ③
D908	F–3	③
D910	G–3	G–3 –
D912	G–3	G–3 –
D913	E–3	E–3 –
D914	F–1	F–5 –
D915	E–3	E–3 –
D916	B–4	③
D917	G–3	G–3 –
D918		E–3 ③
D919	E–3	E–3 –
D1501	A–5	A–1 –
D1502	B–2	B–4 –
D1506	B–1	B–5 –

VARIABLE RESISTOR

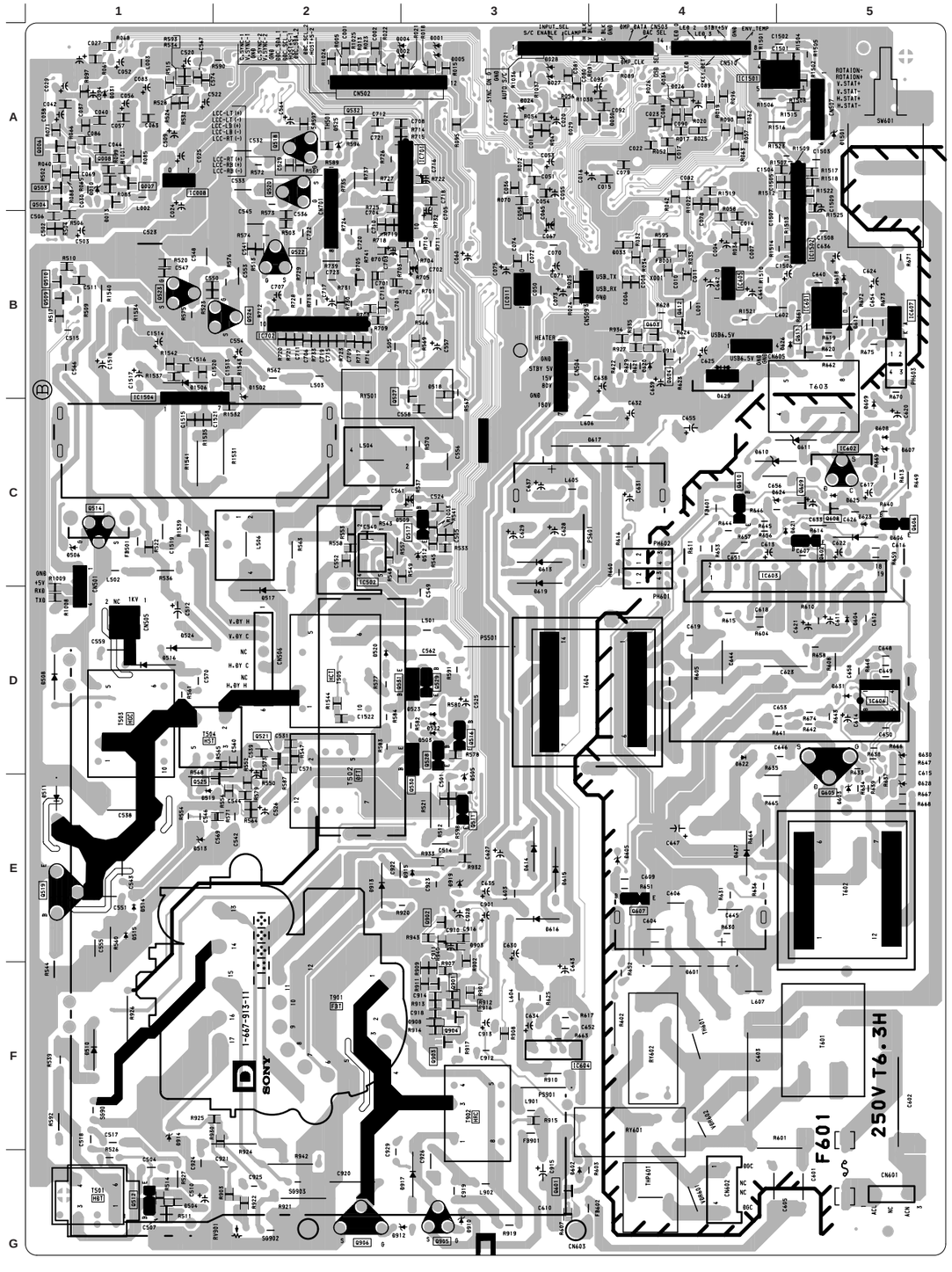
	(Conductor Side)	(Component Side)
RV901	G–2	G–4

CRYSTAL

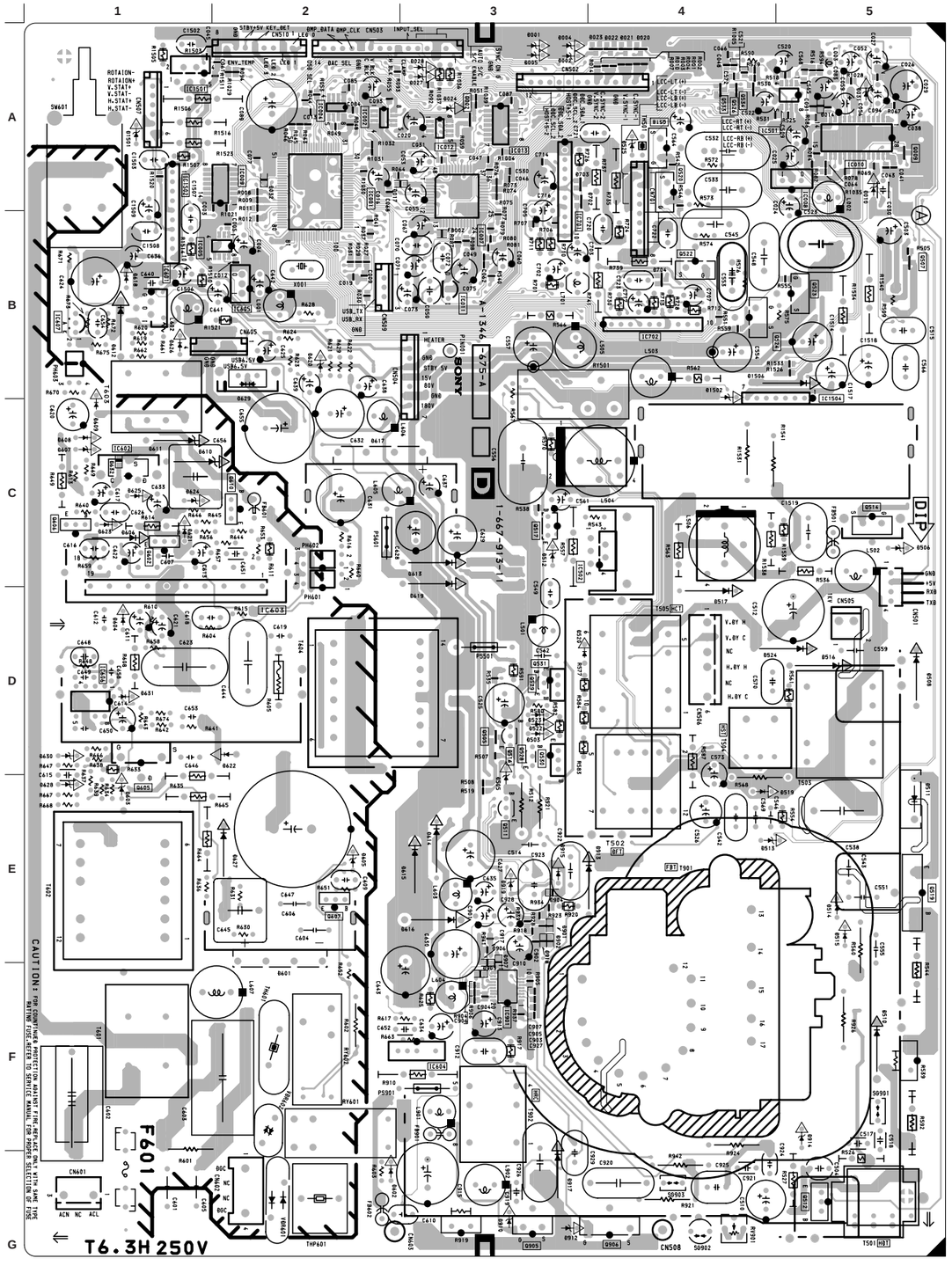
	(Conductor Side)	(Component Side)
X001	B–4	B–2

*: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 5-4)

— D BOARD (Conductor Side) —

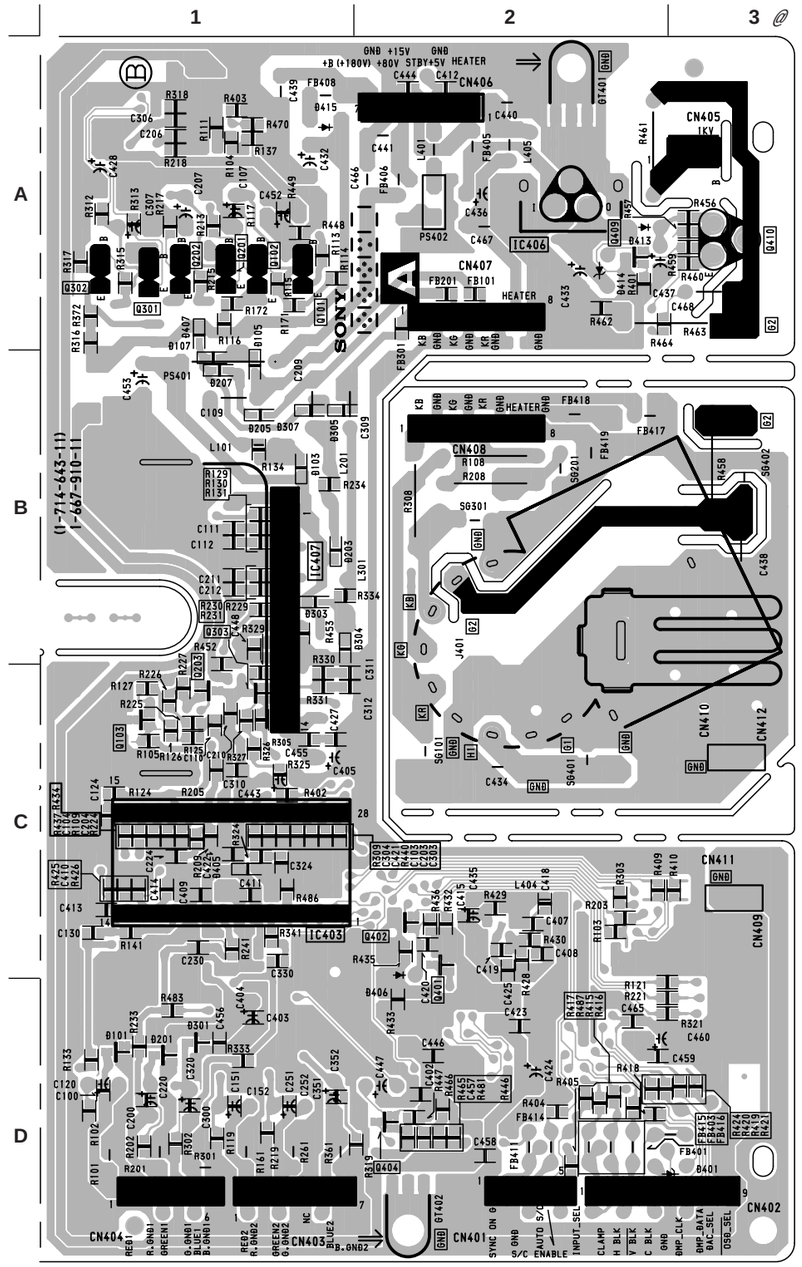


— D BOARD (Component Side) —

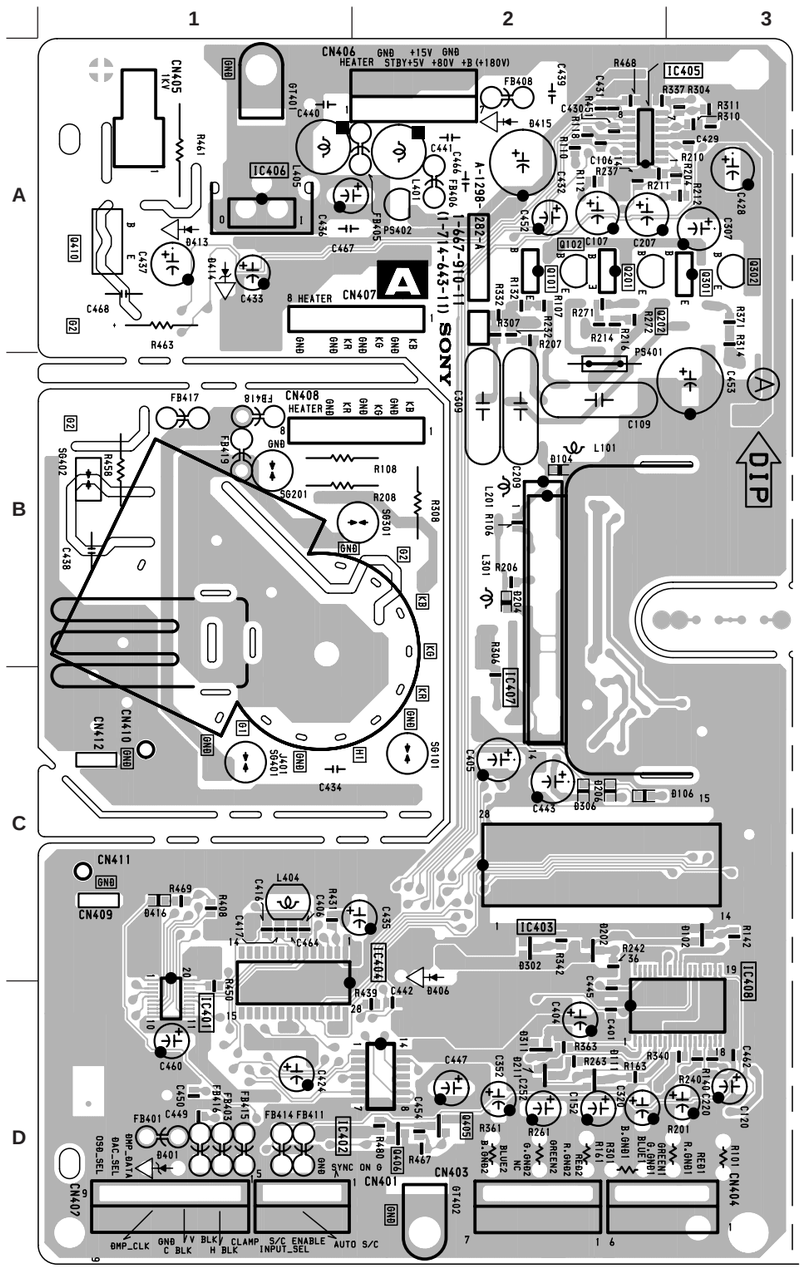


A [VIDEO AMP / RGB OUT]

— A BOARD (Conductor Side) —



— A BOARD (Component Side) —



• A BOARD SEMICONDUCTOR LOCATION

IC

	(Conductor Side)	(Component Side)
IC401		D–1
IC402		D–2
IC403	C–1	C–2
IC404		C–1
IC405		A–2
IC406	A–2	A–1
IC407	B–1	B–2
IC408		D–3

TRANSISTOR

	(Conductor Side)	(Component Side)	*
Q101	A–1	A–2	–
Q102	A–1	A–2	–
Q103	C–1		①
Q201	A–1	A–2	–
Q202	A–1	A–2	–
Q203	C–1		①
Q301	A–1	A–3	–
Q302	A–1	A–3	–
Q303	C–1		①
Q401	C–2		①
Q402	C–2		①
Q404	D–2		①
Q405		D–2	②
Q406		D–2	②
Q409	A–2		①
Q410	A–3		–

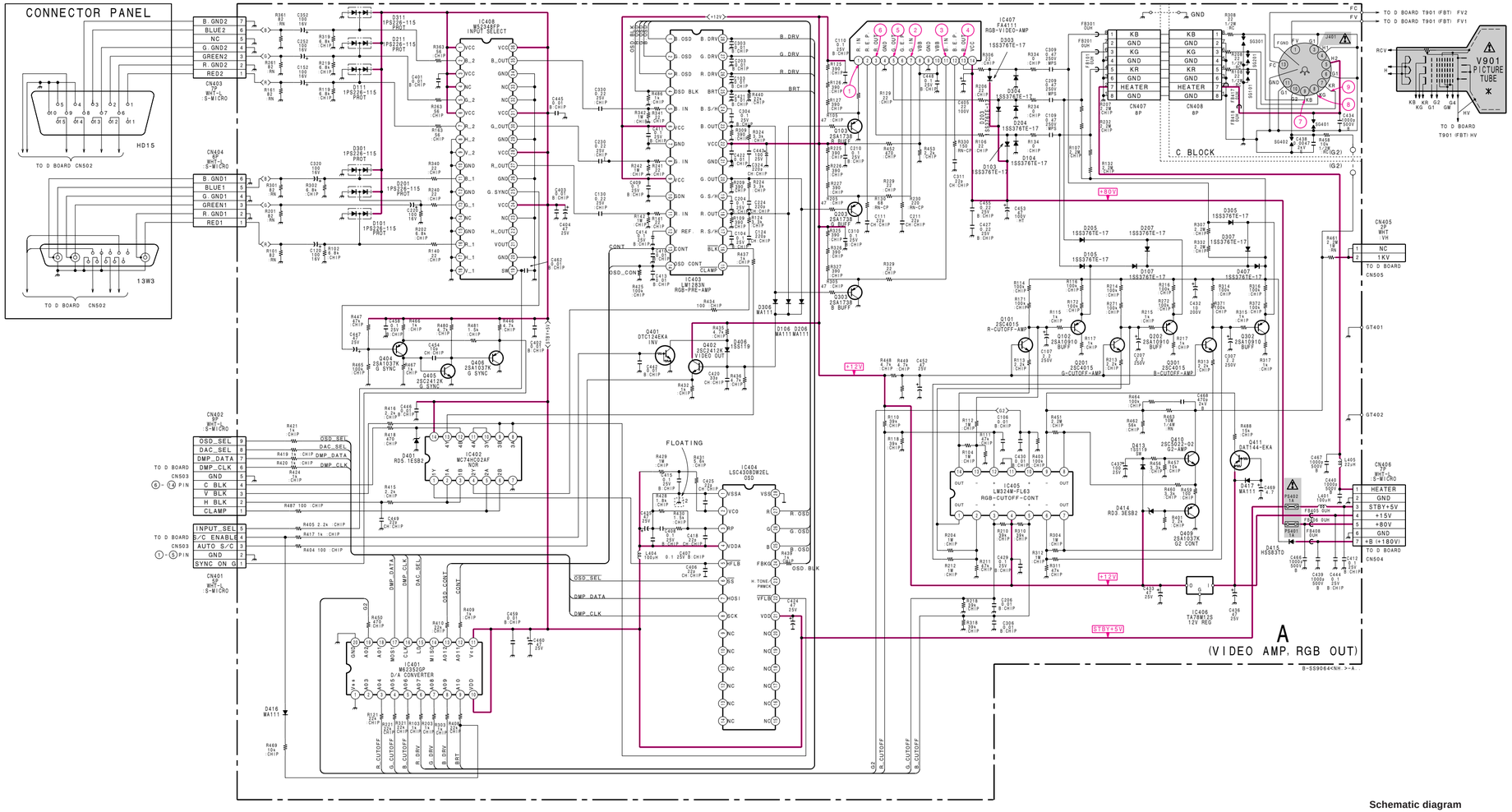
DIODE

	(Conductor Side)	(Component Side)	*
D101	D–1		⑥
D103	B–1		③
D104		B–2	③
D105	B–1		③
D106		C–2	③
D107	B–1		③
D111		D–2	⑦
D201	D–1		⑥
D203	B–1		③
D204		B–2	③
D205	B–1		③
D206		C–2	③
D207	B–1		③
D211		D–2	⑦
D301	D–1		⑥
D303	B–1		③
D304	B–1		③
D305	B–1		③
D306		C–2	③
D307	B–1		③
D311		D–2	⑦
D401	D–3	D–1	–
D406	C–2	C–2	–
D407	A–1		③
D413	A–2	A–1	–
D414	A–2	A–1	–
D415	A–1	A–2	–
D416		C–1	③

∗: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 5-4)

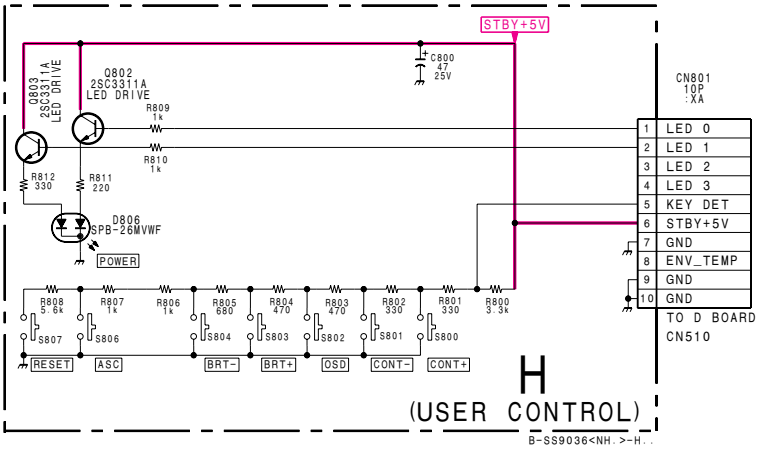
NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

(2) Schematic Diagram of A Board


CONNECTOR PANEL
HD15
13W3
TO D BOARD CN502
IC408 M52748FP INPUT SELECT
IC403 LM1281N RGB-PRE-AMP
IC404 LSC430B0W2EL
IC405 LM324M-FL63 RGB-CUTOFF-CONT
IC406 TA78M12S 12V REG
IC407 FA411 RGB-VIDEO-AMP
IC401 M62352GP D/A CONVERTER
IC402 MC74HC02AF NOR
Q101 2SC4015 R-CUTOFF-AMP
Q201 2SC4015 G-CUTOFF-AMP
Q301 2SC4015 B-CUTOFF-AMP
Q401 DTC124EKA INV
Q402 2SC4124 VIDEO OUT
Q403 2SC2412K G SYNC
Q404 2SA1037K G SYNC
Q405 2SA1037K G SYNC
Q406 2SA1037K G SYNC
Q407 2SC4124 B SYNC
Q408 2SA1037K G2 CONT
Q409 2SA1037K G2 CONT
Q410 2SC5032-02 G2-AMP
Q411 DTA144EKA
Q413 DTC124EKA
Q414 RD3.3ES B2
Q101 2SA1738 R BUFF
Q102 2SA1738 G BUFF
Q103 2SA1738 B BUFF
Q103 2SA1037K R BUFF
Q103 2SA1738 B BUFF
Q103 2SA1738 R BUFF
Q103 2SA1738 G

H [USER CONTROL]

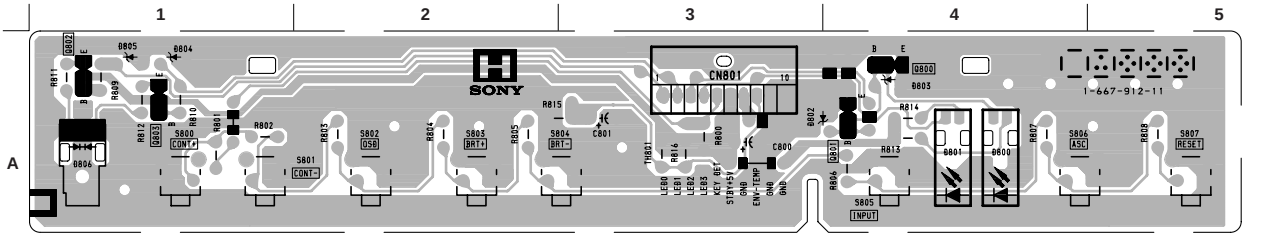
(3) Schematic Diagram of H Board



- **H BOARD VOLTAGE LIST**

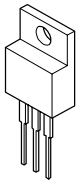
Ref.	Pin No.	Voltage [V]
Q802	B	5.1
	E	4.4
Q803	B	0
	E	0.4

— H BOARD —

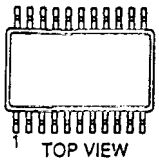


5-4. SEMICONDUCTORS

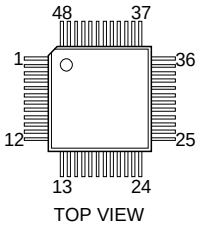
BA05T
NJM78M09FA
TA78M12S



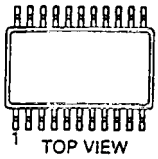
BA9756FS-E2
M62352GP-75E
M62352GP-75ED



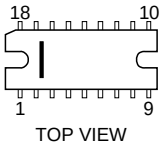
CAX2043Q



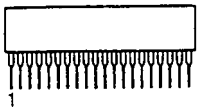
CXA2044M
LSC4380DW2EL



DM-57N



FA4111



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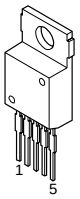

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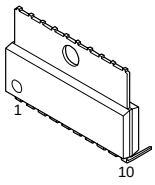

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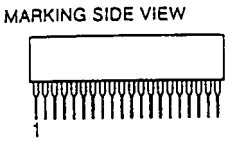

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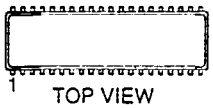

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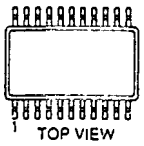

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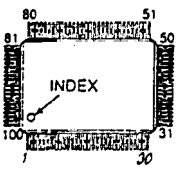

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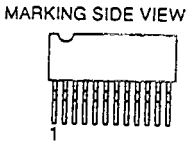

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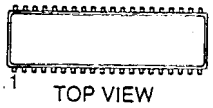

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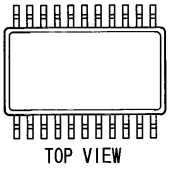

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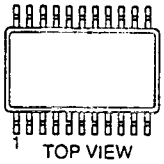
24LC21AT/SN
24LC21T/SN



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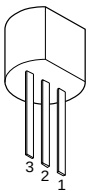

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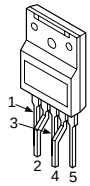

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DTC124EK
DTC124EKA-T146
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2SA1036K-T-146-Q
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2SA1162G
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2SA1738-TX
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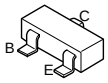

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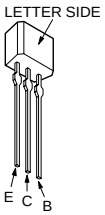

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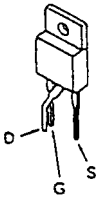

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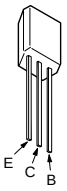

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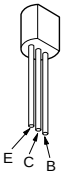

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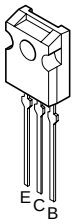

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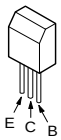

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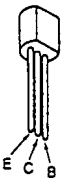

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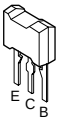

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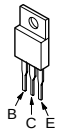

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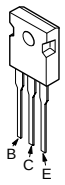

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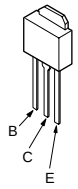

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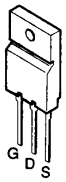

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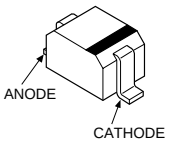
UDZ-TE-17-12B
UDZ-TE-17-33B
UDZ-TE-17-5.1B



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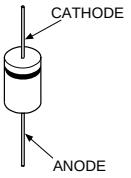

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RD12ES-B2
RD13ES-B2
RD16ES-B2
RD16ES-B3
RD22ES-B2
RD24ES-B2
RE24ES-B3
RD3.3ES-B2
RD5.1ES-B2
RD6.2ES-B2
RD6.8ES-B1
RD6.8ES-B3
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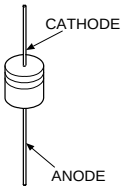
1SS119-25



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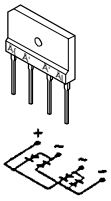

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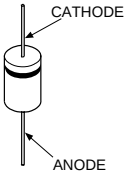

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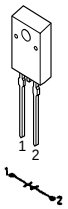

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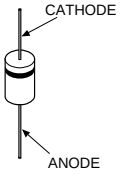

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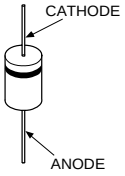

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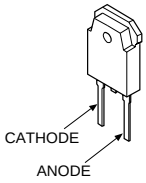

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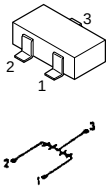

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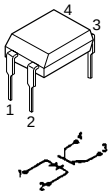

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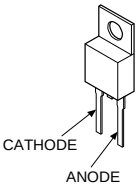

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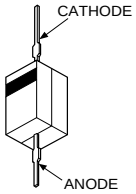

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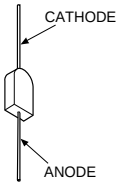
RM11C



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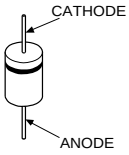

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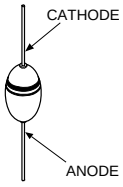

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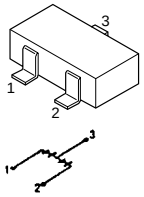

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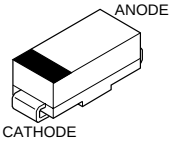

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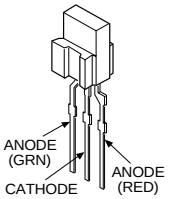


SECTION 6
EXPLODED VIEWS

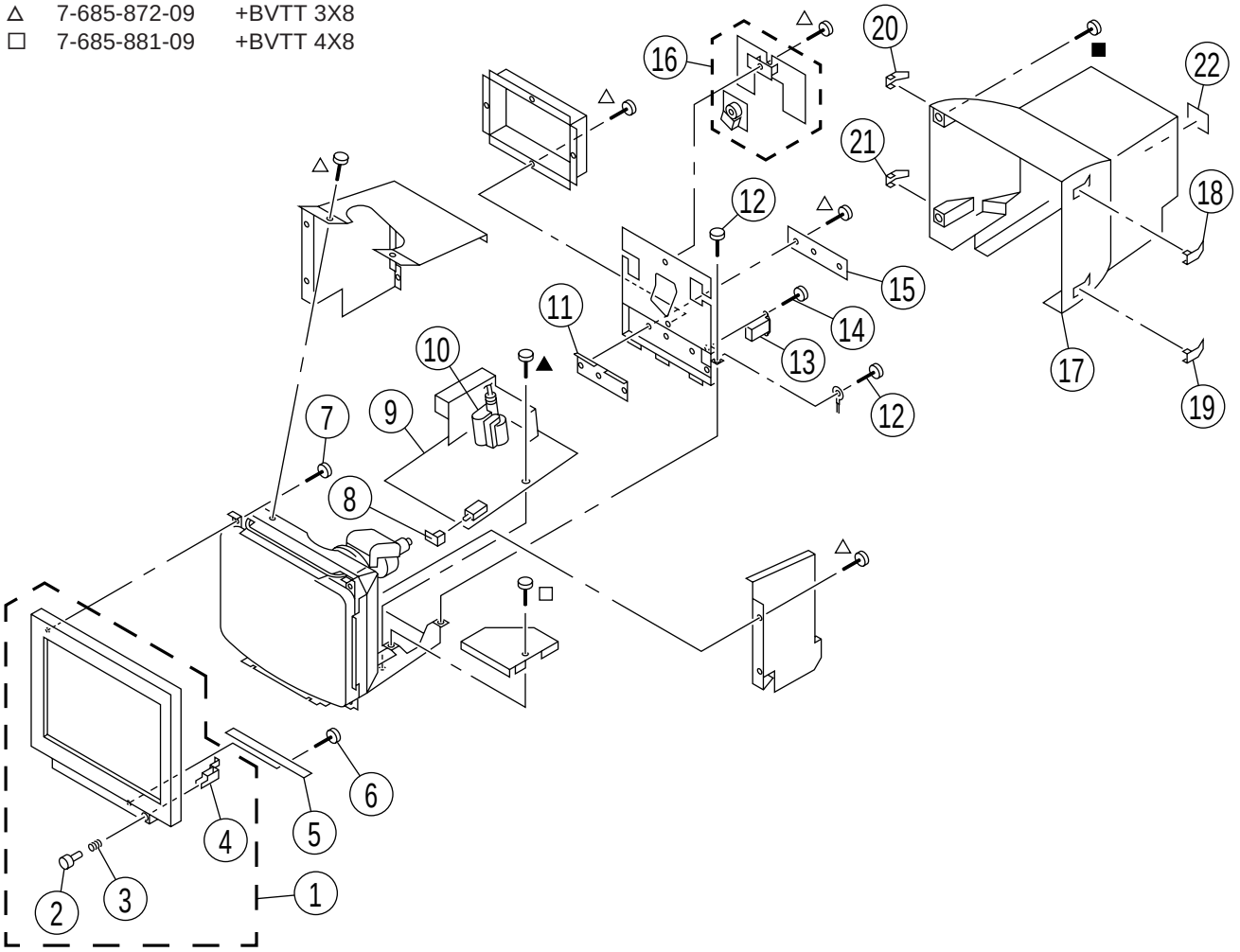
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés per un tramé et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

6-1. CHASSIS

▲ 7-685-646-79 +BVTP 3X8
■ 7-685-663-71 +BVTP 4X16
△ 7-685-872-09 +BVTT 3X8
□ 7-685-881-09 +BVTT 4X8



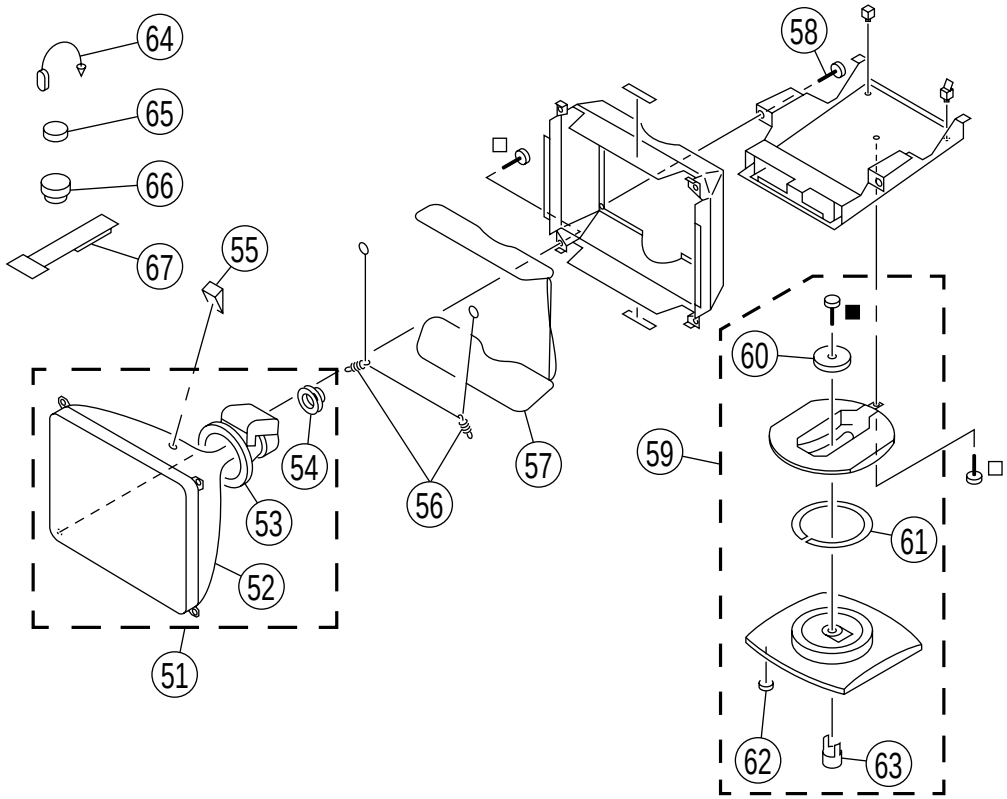
REF.NO.	PART NO.	DESCRIPTION	REMARK
1	X-4035-193-1	BEZEL ASSY [03N/03S]	2-4
1	X-4035-377-1	BEZEL ASSY [43N/43S]	2-4
2	*4-062-456-01	BUTTON, POWER	
3	3-653-339-01	SPRING, COMPRESSION	
4	*4-062-460-01	BAR, EXTENSION	
5	*8-933-314-00	H BOARD, COMPLETE	
6	4-046-797-01	SCREW (3X12), (+)BVTAP	
7	4-365-808-01	SCREW (5), TAPPING	
8	*4-394-972-21	CAP, POWER	
9	*8-933-313-00	D BOARD, COMPLETE	
10	⚠X-4035-425-1	TRANSFORMER ASSY, FLYBACK (NX-4500//J1E4)	
11	*1-694-402-11	TERMINAL BOARD ASSY, I/O	
12	4-389-025-01	SCREW (M4) (EXT TOOTH WASHER)	
13	⚠1-251-681-11	INLET, AC (WITH NOISE FILTER)	
14	4-052-345-01	SCREW, (3X8) (+K), TAPPING	
15	*4-063-091-01	SHEET, CONNECTOR	
16	*8-933-312-00	A BOARD, COMPLETE	
17	X-4035-194-1	CABINET ASSY [03N/03S]	
17	X-4035-378-1	CABINET ASSY [43N/43S]	
18	4-062-461-01	COVER (R TOP), SCREW [03N/03S]	
18	4-062-461-11	COVER (R TOP), SCREW [43N/43S]	
19	4-062-462-01	COVER (R LOW), SCREW [03N/03S]	
19	4-062-462-11	COVER (R LOW), SCREW [43N/43S]	
20	4-062-463-01	COVER (L TOP), SCREW [03N/03S]	
20	4-062-463-11	COVER (L TOP), SCREW [43N/43S]	
21	4-062-464-01	COVER (L LOW), SCREW [03N/03S]	
21	4-062-464-11	COVER (L LOW), SCREW [43N/43S]	
22	4-064-113-01	LABEL, INFORMATION [03N]	
22	4-064-113-21	LABEL, INFORMATION [03S]	
22	4-064-113-11	LABEL, INFORMATION [43N]	
22	4-064-113-31	LABEL, INFORMATION [43S]	

6-2. PICTURE TUBE

■ 7-685-663-71 +BVTP 4X16
□ 7-685-881-09 +BVTT 4X8

Les composants identifiés per un tramé et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

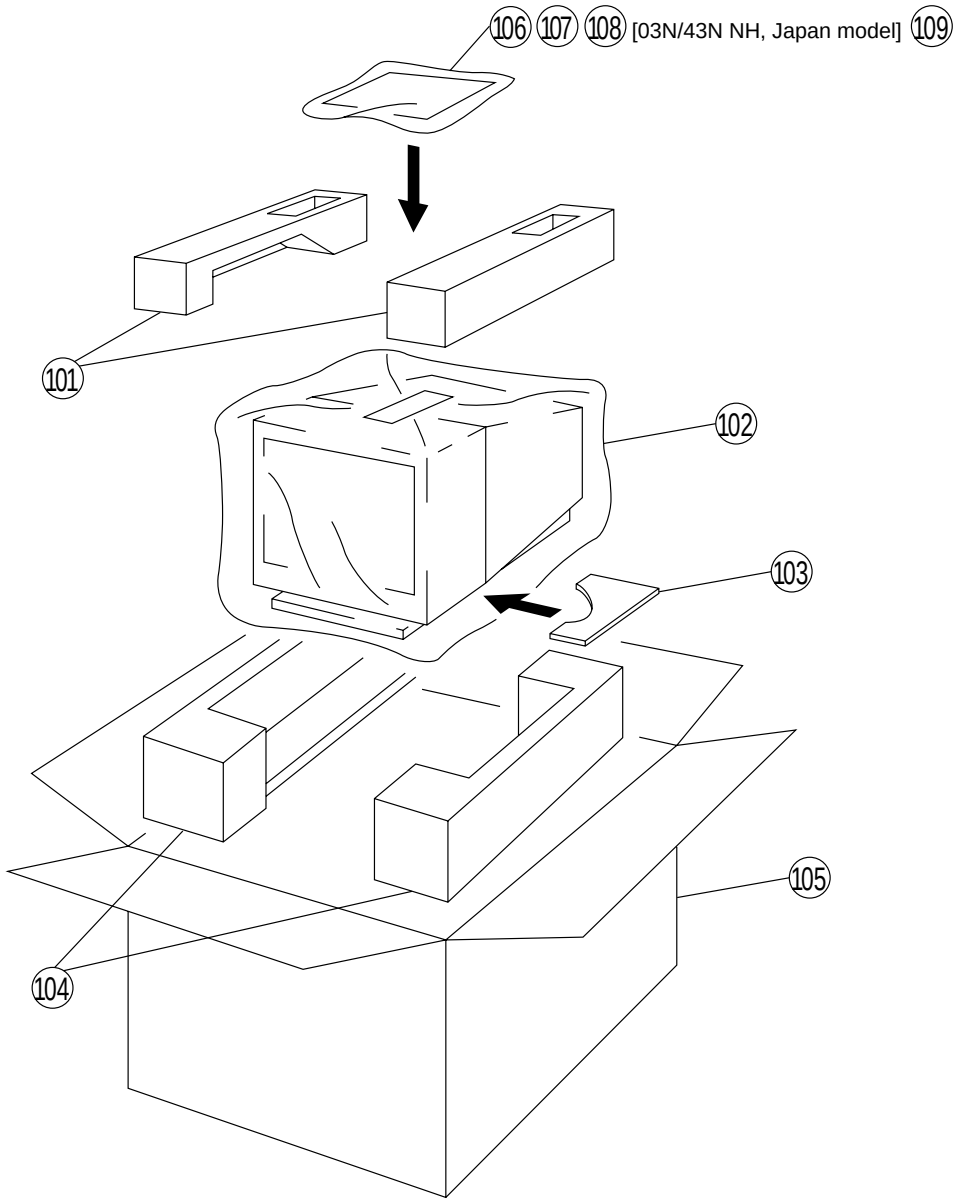


REF.NO.	PART NO.	DESCRIPTION	REMARK
51	⚠8-736-400-82	ITC ASSY (19FRG-R1) [03N/43N]	52-54
51	⚠8-736-403-81	ITC ASSY (19FRG-RS1) [03S/43S]	52-54
52	⚠8-736-400-00	PICTURE TUBE (19FRG) [03N/43N Japan model]	
52	⚠8-736-400-05	PICTURE TUBE (19FRG) [03N/43N NH, AEP model]	
52	⚠8-736-403-05	PICTURE TUBE (19FRG) [03S/43S]	
53	⚠8-451-282-11	DEFLECTION YOKE (Y19FRJ-M)	
54	⚠1-452-932-11	NECK ASSEMBLY, PICTURE TUBE	
55	4-050-492-01	SPACER, DY	
56	*4-047-316-01	SPRING, TENSION	
57	⚠1-416-529-11	COIL, DEGAUSS	
58	4-389-025-01	SCREW (M4) (EXT TOOTH WASHER)	
59	X-4035-241-2	STAND ASSY[03N/03S]	60-63
59	X-4035-411-1	STAND ASSY[43N/43S]	60-63
60	4-060-340-01	STOPPER (A)	
61	4-060-339-01	RING, TILT SWIVEL	
62	4-047-474-01	FOOT, RUBBER	
63	4-041-621-01	STOPPER (B)	
64	4-308-870-00	CLIP, LEAD WIRE	
65	1-452-032-00	MAGNET,DISC; 10mm ϕ	
66	1-452-094-00	MAGNET, ROTATABLE DISK; 15mm ϕ	
67	4-059-493-01	PERMALLOY (90), CONV.CORRECT	

6-3. PACKING MATERIALS

Les composants identifiés per un tramé et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.



REF.NO.	PART NO.	DESCRIPTION	REMARK
101	4-062-474-01	CUSHION (UPPER) (ASSY)	
102	4-063-577-01	BAG, POLYETHYLENE [03N/03S]	
102	4-063-578-01	BAG, PROTECTION [43N/43S]	
103	4-062-648-01	PAD, TILT FIXED	
104	4-062-475-01	CUSHION (LOWER) (ASSY)	
105	4-063-550-01	INDIVIDUAL CARTON	
106	1-783-247-11	CABLE ASSY (15P D SUB X2 CONNECTOR) [03N/03S]	
106	1-783-250-11	CABLE ASSY (15P D SUB X2 CONNECTOR) [43N/43S]	
107	4-063-796-01	INFORMATION DISK (IBM)	
108	⚠1-783-507-11	CORD SET, POWER (10A/125V)	[43N NH model]
108	⚠1-783-507-21	CORD SET, POWER (10A/125V)	[03N NH model]
108	⚠1-783-533-11	CORD SET, POWER (7A/125V)	[03N/43N Japan model]
109	3-862-445-01	MANUAL, INSTRUCTION	[03N/43N Japan model]
109	3-862-445-11	MANUAL, INSTRUCTION	[except 03N/43N Japan model]

SECTION 7
ELECTRICAL PARTS LIST

A

NOTE:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés per un tramé et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

The components identified by [in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

RESISTORS
- All resistors are in ohms
- F : nonflammable

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- CAPACITORS
  MF : µF
- COILS
  UH : µH

REF.NO.	PART NO.	DESCRIPTION			REMARK
*	8-933-312-00	A BOARD, COMPLETE			
		**********			
	4-382-854-11	SCREW (M3X10), P, SW (+) (IC406, IC407)			
		<CAPACITOR>			
C103	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C104	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C106	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C107	1-107-649-11	ELECT 2.2MF	20%	250V	
C109	1-117-450-11	FILM 0.47MF	10%	250V	
C110	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C111	1-163-235-11	CERAMIC CHIP 22PF	5%	50V	
C120	1-126-933-11	ELECT 100MF	20%	16V	
C124	1-163-259-91	CERAMIC CHIP 220PF	5%	50V	
C130	1-115-340-11	CERAMIC CHIP 0.22MF	10%	25V	
C152	1-126-933-11	ELECT 100MF	20%	16V	
C203	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C204	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C206	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C207	1-107-649-11	ELECT 2.2MF	20%	250V	
C209	1-117-450-11	FILM 0.47MF	10%	250V	
C210	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C211	1-163-235-11	CERAMIC CHIP 22PF	5%	50V	
C220	1-126-933-11	ELECT 100MF	20%	16V	
C224	1-163-259-91	CERAMIC CHIP 220PF	5%	50V	
C230	1-115-340-11	CERAMIC CHIP 0.22MF	10%	25V	
C252	1-126-933-11	ELECT 100MF	20%	16V	
C303	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C304	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C306	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C307	1-107-649-11	ELECT 2.2MF	20%	250V	
C309	1-117-450-11	FILM 0.47MF	10%	250V	
C310	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C311	1-163-235-11	CERAMIC CHIP 22PF	5%	50V	
C320	1-126-933-11	ELECT 100MF	20%	16V	
C324	1-163-259-91	CERAMIC CHIP 220PF	5%	50V	
C330	1-115-340-11	CERAMIC CHIP 0.22MF	10%	25V	
C352	1-126-933-11	ELECT 100MF	20%	16V	
C401	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C402	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C403	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C404	1-104-664-11	ELECT 47MF	20%	25V	
C405	1-128-560-11	ELECT 22MF	20%	100V	
C406	1-163-235-11	CERAMIC CHIP 22PF	5%	50V	
C407	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C408	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C409	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C410	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C411	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C412	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C413	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C414	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C415	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C418	1-163-235-11	CERAMIC CHIP 22PF	5%	50V	
C420	1-163-239-11	CERAMIC CHIP 33PF	5%	50V	
C421	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C422	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C424	1-104-664-11	ELECT 47MF	20%	25V	
C425	1-163-235-11	CERAMIC CHIP 22PF	5%	50V	
C427	1-115-340-11	CERAMIC CHIP 0.22MF	10%	25V	
C429	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C430	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C432	1-107-652-11	ELECT 10MF	20%	200V	
C433	1-104-664-11	ELECT 47MF	20%	25V	
C434	1-162-318-11	CERAMIC 0.001MF	10%	500V	
C435	1-104-664-11	ELECT 47MF	20%	25V	
C436	1-104-664-11	ELECT 47MF	20%	25V	
C437	1-104-665-11	ELECT 100MF	20%	25V	
C438	1-162-114-00	CERAMIC 0.0047MF		2KV	
C439	1-162-318-11	CERAMIC 0.001MF	10%	500V	
C440	1-162-318-11	CERAMIC 0.001MF	10%	500V	
C442	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C443	1-128-526-11	ELECT 100MF	20%	25V	
C444	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C445	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C446	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C447	1-104-664-11	ELECT 47MF	20%	25V	
C448	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C449	1-163-235-11	CERAMIC CHIP 22PF	5%	50V	
C452	1-104-664-11	ELECT 47MF	20%	25V	
C453	1-128-562-11	ELECT 47MF	20%	100V	
C454	1-163-227-11	CERAMIC CHIP 10PF	0.5PF	50V	
C455	1-115-340-11	CERAMIC CHIP 0.22MF	10%	25V	
C458	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

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REF.NO.	PART NO.	DESCRIPTION	REMARK
C459	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C460	1-104-664-11	ELECT 47MF 20% 25V	
C462	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C466	1-162-318-11	CERAMIC 0.001MF 10% 500V	
C467	1-162-318-11	CERAMIC 0.001MF 10% 500V	
C468	1-162-134-11	CERAMIC 470PF 10% 2KV	
C469	1-126-963-11	ELECT 4.7MF 20% 50V	
		<CONNECTOR>	
CN401*	1-564-520-11	PLUG, CONNECTOR 5P	
CN402	1-564-524-11	PLUG, CONNECTOR 9P	
CN403*	1-564-522-11	PLUG, CONNECTOR 7P	
CN404*	1-564-521-11	PLUG, CONNECTOR 6P	
CN405*	1-766-179-11	PIN, CONNECTOR (PC BOARD) 2P	
CN406*	1-564-522-11	PLUG, CONNECTOR 7P	
CN412	1-695-915-11	TAB (CONTACT)	
		<DIODE>	
D101	8-719-062-51	DIODE 1PS226-115	
D103	8-719-052-12	DIODE 1SS376TE-17	
D104	8-719-052-12	DIODE 1SS376TE-17	
D105	8-719-052-12	DIODE 1SS376TE-17	
D106	8-719-404-49	DIODE MA111	
D107	8-719-052-12	DIODE 1SS376TE-17	
D111	8-719-062-51	DIODE 1PS226-115	
D201	8-719-062-51	DIODE 1PS226-115	
D203	8-719-052-12	DIODE 1SS376TE-17	
D204	8-719-052-12	DIODE 1SS376TE-17	
D205	8-719-052-12	DIODE 1SS376TE-17	
D206	8-719-404-49	DIODE MA111	
D207	8-719-052-12	DIODE 1SS376TE-17	
D211	8-719-062-51	DIODE 1PS226-115	
D301	8-719-062-51	DIODE 1PS226-115	
D303	8-719-052-12	DIODE 1SS376TE-17	
D304	8-719-052-12	DIODE 1SS376TE-17	
D305	8-719-052-12	DIODE 1SS376TE-17	
D306	8-719-404-49	DIODE MA111	
D307	8-719-052-12	DIODE 1SS376TE-17	
D311	8-719-062-51	DIODE 1PS226-115	
D401	8-719-109-85	ZENER DIODE RD5.1ESB2	
D406	8-719-911-19	DIODE 1SS119-25	
D407	8-719-052-12	DIODE 1SS376TE-17	
D413	8-719-911-19	DIODE 1SS119-25	
D414	8-719-109-66	ZENER DIODE RD3.3ESB2	
D415	8-719-051-85	DIODE HSS83TD	
D416	8-719-404-49	DIODE MA111	
D417	8-719-404-49	DIODE MA111	
		<FERRITE BEAD>	
FB101	1-500-419-21	FERRITE 0UH	
FB201	1-500-419-21	FERRITE 0UH	
FB301	1-500-419-21	FERRITE 0UH	
FB405	1-412-911-31	FERRITE 0UH	
FB406	1-412-911-31	FERRITE 0UH	
FB408	1-412-911-31	FERRITE 0UH	
FB417	1-412-911-31	FERRITE 0UH	
FB418	1-412-911-31	FERRITE 0UH	
		<TERMINAL>	
GT401*	1-537-738-21	TERMINAL, EARTH	
GT402*	1-537-738-21	TERMINAL, EARTH	
		<IC>	
IC401	8-759-635-27	IC M62352GP-75E	
IC402	8-759-925-72	IC SN74HC02ANS	
IC403	8-759-445-85	IC LM1283N	
IC404	8-759-492-78	IC LSC4380DW2EL	
IC405	8-759-502-82	IC LM324M	
IC406	8-759-263-43	IC TA78M12S	
IC407	8-749-013-74	IC FA4111	
IC408	8-759-522-86	IC M52755FP-TP	
		<JACK>	
J401	⚠1-251-598-11	SOCKET, PICTURE TUBE	
		<COIL>	
L401	1-412-537-31	INDUCTOR 100UH	
L404	1-408-615-31	INDUCTOR 100UH	
L405	1-412-529-11	INDUCTOR 22UH	
		<IC LINK>	
PS401	⚠1-533-590-31	LINK, IC (1A/90V AC, 60V DC)	
PS402	⚠1-532-637-91	LINK, IC (1A/150V)	
		<TRANSISTOR>	
Q101	8-729-041-66	TRANSISTOR 2SC4015TV2	
Q102	8-729-200-17	TRANSISTOR 2SA1091-O	
Q103	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q201	8-729-041-66	TRANSISTOR 2SC4015TV2	
Q202	8-729-200-17	TRANSISTOR 2SA1091-O	
Q203	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q301	8-729-041-66	TRANSISTOR 2SC4015TV2	
Q302	8-729-200-17	TRANSISTOR 2SA1091-O	
Q303	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q401	8-729-901-00	TRANSISTOR DTC124EK	
Q402	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q404	8-729-216-22	TRANSISTOR 2SA1162-G	
Q405	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q406	8-729-216-22	TRANSISTOR 2SA1162-G	
Q409	8-729-216-22	TRANSISTOR 2SA1162-G	
Q410	8-729-032-61	TRANSISTOR 2SC5022-02	
Q411	8-729-027-38	TRANSISTOR DTA144EKA-T146	

A

REF.NO.	PART NO.	DESCRIPTION			REMARK
	<RESISTOR>				
R101	1-215-395-00	METAL	82	1%	1/4W
R103	1-216-049-91	RES,CHIP	1K	5%	1/10W
R104	1-216-121-91	RES,CHIP	1M	5%	1/10W
R105	1-216-017-91	RES,CHIP	47	5%	1/10W
R106	1-216-009-00	RES,CHIP	22	5%	1/10W
R107	1-216-129-00	RES,CHIP	2.2M	5%	1/10W
R108	1-219-497-11	CARBON	22	5%	1/2W
R109	1-216-039-00	RES,CHIP	390	5%	1/10W
R110	1-216-689-11	RES,CHIP	39K	5%	1/10W
R111	1-216-089-91	RES,CHIP	47K	5%	1/10W
R112	1-216-121-91	RES,CHIP	1M	5%	1/10W
R113	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R114	1-216-097-91	RES,CHIP	100K	5%	1/10W
R115	1-216-049-91	RES,CHIP	1K	5%	1/10W
R116	1-216-097-91	RES,CHIP	100K	5%	1/10W
R117	1-216-049-91	RES,CHIP	1K	5%	1/10W
R118	1-216-689-11	RES,CHIP	39K	5%	1/10W
R121	1-216-081-00	RES,CHIP	22K	5%	1/10W
R124	1-216-061-00	RES,CHIP	3.3K	5%	1/10W
R125	1-216-039-00	RES,CHIP	390	5%	1/10W
R126	1-216-039-00	RES,CHIP	390	5%	1/10W
R127	1-216-039-00	RES,CHIP	390	5%	1/10W
R129	1-216-009-00	RES,CHIP	22	5%	1/10W
R130	1-216-623-11	METAL CHIP	68	0.50%	1/10W
R132	1-216-129-00	RES,CHIP	2.2M	5%	1/10W
R134	1-216-295-91	SHORT	0		
R140	1-216-009-00	RES,CHIP	22	5%	1/10W
R141	1-216-009-00	RES,CHIP	22	5%	1/10W
R142	1-216-121-91	RES,CHIP	1M	5%	1/10W
R161	1-215-395-00	METAL	82	1%	1/4W
R163	1-216-009-00	RES,CHIP	22	5%	1/10W
R171	1-216-097-91	RES,CHIP	100K	5%	1/10W
R172	1-216-097-91	RES,CHIP	100K	5%	1/10W
R201	1-215-395-00	METAL	82	1%	1/4W
R203	1-216-049-91	RES,CHIP	1K	5%	1/10W
R204	1-216-121-91	RES,CHIP	1M	5%	1/10W
R205	1-216-017-91	RES,CHIP	47	5%	1/10W
R206	1-216-009-00	RES,CHIP	22	5%	1/10W
R207	1-216-129-00	RES,CHIP	2.2M	5%	1/10W
R208	1-219-497-11	CARBON	22	5%	1/2W
R209	1-216-039-00	RES,CHIP	390	5%	1/10W
R210	1-216-689-11	RES,CHIP	39K	5%	1/10W
R211	1-216-089-91	RES,CHIP	47K	5%	1/10W
R212	1-216-121-91	RES,CHIP	1M	5%	1/10W
R213	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R214	1-216-097-91	RES,CHIP	100K	5%	1/10W
R215	1-216-049-91	RES,CHIP	1K	5%	1/10W
R216	1-216-097-91	RES,CHIP	100K	5%	1/10W
R217	1-216-049-91	RES,CHIP	1K	5%	1/10W
R218	1-216-689-11	RES,CHIP	39K	5%	1/10W
R221	1-216-081-00	RES,CHIP	22K	5%	1/10W
R224	1-216-061-00	RES,CHIP	3.3K	5%	1/10W
R225	1-216-039-00	RES,CHIP	390	5%	1/10W
R226	1-216-039-00	RES,CHIP	390	5%	1/10W
R227	1-216-039-00	RES,CHIP	390	5%	1/10W
R229	1-216-009-00	RES,CHIP	22	5%	1/10W
R230	1-216-635-11	METAL CHIP	220	0.50%	1/10W
R232	1-216-129-00	RES,CHIP	2.2M	5%	1/10W
R234	1-216-295-91	SHORT	0		
R240	1-216-009-00	RES,CHIP	22	5%	1/10W
R241	1-216-009-00	RES,CHIP	22	5%	1/10W
R242	1-216-121-91	RES,CHIP	1M	5%	1/10W
R261	1-215-395-00	METAL	82	1%	1/4W
R263	1-216-009-00	RES,CHIP	22	5%	1/10W
R271	1-216-097-91	RES,CHIP	100K	5%	1/10W
R272	1-216-097-91	RES,CHIP	100K	5%	1/10W
R301	1-215-395-00	METAL	82	1%	1/4W
R303	1-216-049-91	RES,CHIP	1K	5%	1/10W
R304	1-216-121-91	RES,CHIP	1M	5%	1/10W
R305	1-216-017-91	RES,CHIP	47	5%	1/10W
R306	1-216-009-00	RES,CHIP	22	5%	1/10W
R307	1-216-129-00	RES,CHIP	2.2M	5%	1/10W
R308	1-219-497-11	CARBON	22	5%	1/2W
R309	1-216-039-00	RES,CHIP	390	5%	1/10W
R310	1-216-689-11	RES,CHIP	39K	5%	1/10W
R311	1-216-089-91	RES,CHIP	47K	5%	1/10W
R312	1-216-121-91	RES,CHIP	1M	5%	1/10W
R313	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R314	1-216-097-91	RES,CHIP	100K	5%	1/10W
R315	1-216-049-91	RES,CHIP	1K	5%	1/10W
R316	1-216-097-91	RES,CHIP	100K	5%	1/10W
R317	1-216-049-91	RES,CHIP	1K	5%	1/10W
R318	1-216-689-11	RES,CHIP	39K	5%	1/10W
R321	1-216-081-00	RES,CHIP	22K	5%	1/10W
R324	1-216-061-00	RES,CHIP	3.3K	5%	1/10W
R325	1-216-039-00	RES,CHIP	390	5%	1/10W
R326	1-216-039-00	RES,CHIP	390	5%	1/10W
R327	1-216-039-00	RES,CHIP	390	5%	1/10W
R329	1-216-009-00	RES,CHIP	22	5%	1/10W
R330	1-216-631-11	METAL CHIP	150	0.50%	1/10W
R332	1-216-129-00	RES,CHIP	2.2M	5%	1/10W
R334	1-216-295-91	SHORT	0		
R340	1-216-009-00	RES,CHIP	22	5%	1/10W
R341	1-216-009-00	RES,CHIP	22	5%	1/10W
R342	1-216-121-91	RES,CHIP	1M	5%	1/10W
R361	1-215-395-00	METAL	82	1%	1/4W
R363	1-216-009-00	RES,CHIP	22	5%	1/10W
R371	1-216-097-91	RES,CHIP	100K	5%	1/10W
R372	1-216-097-91	RES,CHIP	100K	5%	1/10W
R401	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R403	1-216-097-91	RES,CHIP	100K	5%	1/10W
R404	1-216-025-91	RES,CHIP	100	5%	1/10W
R405	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R408	1-216-081-00	RES,CHIP	22K	5%	1/10W
R409	1-216-049-91	RES,CHIP	1K	5%	1/10W
R410	1-216-081-00	RES,CHIP	22K	5%	1/10W
R415	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R416	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R417	1-216-049-91	RES,CHIP	1K	5%	1/10W
R418	1-216-041-00	RES,CHIP	470	5%	1/10W
R419	1-216-049-91	RES,CHIP	1K	5%	1/10W

REF.NO.	PART NO.	DESCRIPTION			REMARK
R420	1-216-049-91	RES,CHIP	1K	5%	1/10W
R421	1-216-049-91	RES,CHIP	1K	5%	1/10W
R424	1-216-049-91	RES,CHIP	1K	5%	1/10W
R425	1-216-097-91	RES,CHIP	100K	5%	1/10W
R428	1-216-055-00	RES,CHIP	1.8K	5%	1/10W
R429	1-216-121-91	RES,CHIP	1M	5%	1/10W
R430	1-216-053-00	RES,CHIP	1.5K	5%	1/10W
R431	1-216-067-00	RES,CHIP	5.6K	5%	1/10W
R432	1-216-049-91	RES,CHIP	1K	5%	1/10W
R434	1-216-025-91	RES,CHIP	100	5%	1/10W
R435	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R436	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R437	1-216-049-91	RES,CHIP	1K	5%	1/10W
R439	1-216-049-91	RES,CHIP	1K	5%	1/10W
R440	1-216-081-00	RES,CHIP	22K	5%	1/10W
R446	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R447	1-216-089-91	RES,CHIP	47K	5%	1/10W
R448	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R448	1-216-077-00	RES,CHIP	15K	5%	1/10W
R449	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R450	1-216-041-00	RES,CHIP	470	5%	1/10W
R451	1-216-129-00	RES,CHIP	2.2M	5%	1/10W
R452	1-216-041-00	RES,CHIP	470	5%	1/10W
R453	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R456	1-216-061-00	RES,CHIP	3.3K	5%	1/10W
R457	1-216-073-00	RES,CHIP	10K	5%	1/10W
R458	1-219-749-91	CARBON	10K	5%	1/2W
R459	1-216-025-91	RES,CHIP	100	5%	1/10W
R460	1-216-061-00	RES,CHIP	3.3K	5%	1/10W
R461	1-211-885-21	METAL	2.2M	5%	1W
R462	1-216-091-00	RES,CHIP	56K	5%	1/10W
R463	1-211-895-11	METAL	10M	10%	1/4W
R464	1-216-097-91	RES,CHIP	100K	5%	1/10W
R465	1-216-097-91	RES,CHIP	100K	5%	1/10W
R466	1-216-049-91	RES,CHIP	1K	5%	1/10W
R467	1-216-049-91	RES,CHIP	1K	5%	1/10W
R469	1-216-073-00	RES,CHIP	10K	5%	1/10W
R480	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R481	1-216-053-00	RES,CHIP	1.5K	5%	1/10W
R486	1-216-049-91	RES,CHIP	1K	5%	1/10W
R487	1-216-025-91	RES,CHIP	100	5%	1/10W

<SPARK GAP>

SG101	1-517-499-21	GAP, SPARK	
SG201	1-517-499-21	GAP, SPARK	
SG301	1-517-499-21	GAP, SPARK	
SG401	1-517-499-21	GAP, SPARK	
SG402	1-519-422-11	GAP, SPARK	

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REF.NO.	PART NO.	DESCRIPTION			REMARK
*	8-933-313-00	D BOARD, COMPLETE			
		**********			
	2-371-561-00	BUSHING (P), INSULATING (IC502)			
	4-060-842-01	SHEET, INSULATING (IC502)			
	4-060-844-01	SHEET, INSULATING (IC1504)			
	4-382-854-11	SCREW (M3X10), P, SW (+) (IC502, IC603,IC1504, Q514, Q530, Q531, Q605, Q905, Q906,D511,D601,D617,D622, R539, R919)			
	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3			

<CAPACITOR>

C001	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C002	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C003	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C004	1-104-664-11	ELECT	47MF	20%	25V
C005	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C006	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C007	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C008	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C009	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C010	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C011	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C012	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C013	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C014	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C015	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C016	1-104-664-11	ELECT	47MF	20%	25V
C017	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C018	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C020	1-126-964-11	ELECT	10MF	20%	50V
C021	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C022	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C023	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C024	1-104-664-11	ELECT	47MF	20%	25V
C025	1-104-664-11	ELECT	47MF	20%	25V
C026	1-163-275-11	CERAMIC CHIP	0.001MF	5%	50V
C027	1-126-961-11	ELECT	2.2MF	20%	50V
C029	1-126-935-11	ELECT	470MF	20%	16V
C030	1-137-372-11	FILM	0.022MF	5%	50V
C031	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C036	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C037	1-164-695-11	CERAMIC CHIP	0.0022MF	5%	50V
C038	1-126-960-11	ELECT	1MF	20%	50V
C040	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
C041	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C042	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C043	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C044	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C045	1-104-760-11	CERAMIC CHIP	0.047MF	10%	50V
C046	1-104-760-11	CERAMIC CHIP	0.047MF	10%	50V
C047	1-104-760-11	CERAMIC CHIP	0.047MF	10%	50V
C048	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C049	1-104-760-11	CERAMIC CHIP	0.047MF	10%	50V
C050	1-136-173-00	FILM	0.47MF	5%	50V
C051	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V

D

Les composants identifiés per un tramé et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION			REMARK
C052	1-126-963-11	ELECT	4.7MF	20%	50V
C053	1-126-960-11	ELECT	1MF	20%	50V
C054	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C055	1-126-964-11	ELECT	10MF	20%	50V
C056	1-126-964-11	ELECT	10MF	20%	50V
C057	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C058	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C059	1-163-257-11	CERAMIC CHIP	180PF	5%	50V
C060	1-126-964-11	ELECT	10MF	20%	50V
C061	1-104-760-11	CERAMIC CHIP	0.047MF	10%	50V
C062	1-104-760-11	CERAMIC CHIP	0.047MF	10%	50V
C063	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C064	1-163-037-11	CERAMIC CHIP	0.022MF	10%	50V
C065	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C066	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C067	1-126-964-11	ELECT	10MF	20%	50V
C068	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C070	1-137-399-11	FILM	0.1MF	5%	50V
C071	1-126-960-11	ELECT	1MF	20%	50V
C072	1-137-399-11	FILM	0.1MF	5%	50V
C073	1-126-964-11	ELECT	10MF	20%	50V
C074	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C075	1-104-665-11	ELECT	100MF	20%	25V
C077	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C078	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C079	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C080	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C081	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C083	1-104-664-11	ELECT	47MF	20%	25V
C084	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C085	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C086	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C087	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C091	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C092	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C093	1-126-964-11	ELECT	10MF	20%	50V
C094	1-104-664-11	ELECT	47MF	20%	25V
C501	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C502	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C503	1-126-967-11	ELECT	47MF	20%	50V
C504	1-136-173-00	FILM	0.47MF	5%	50V
C505	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C506	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C507	1-163-037-11	CERAMIC CHIP	0.022MF	10%	50V
C509	1-104-664-11	ELECT	47MF	20%	25V
C510	1-126-941-11	ELECT	470MF	20%	25V
C511	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C512	1-110-641-51	ELECT	33MF	20%	200V
C514	1-164-281-11	CERAMIC	0.001MF		2KV
C515	1-106-383-00	MYLAR	0.047MF	10%	200V
C517	1-137-368-11	FILM	0.0047MF	5%	50V
C518	1-137-368-11	FILM	0.0047MF	5%	50V
C520	1-104-664-11	ELECT	47MF	20%	25V
C521	1-164-182-11	CERAMIC CHIP	0.0033MF	10%	50V
C522	1-126-963-11	ELECT	4.7MF	20%	50V
C523	1-117-955-11	FILM	0.17MF	5%	400V
C524	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C525	1-128-562-11	ELECT	47MF	20%	100V
C526	1-128-561-91	ELECT	33MF	20%	100V
C529	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C530	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C532	1-115-519-11	FILM	0.56MF	5%	250V
C533	1-115-515-11	FILM	0.27MF	5%	250V
C536	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C538	1-117-959-11	FILM	4700PF	3%	1.8KV
C540	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C541	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C542	1-117-948-91	FILM	1500PF	5%	630V
C543	1-162-558-11	CERAMIC	100PF	10%	2KV
C545	1-115-512-11	FILM	0.15MF	5%	250
C546	1-107-597-11	CERAMIC	22PF	5%	500V
C547	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C548	1-115-509-11	FILM	0.068MF	5%	250V
C549	1-137-399-11	FILM	0.1MF	5%	50V
C550	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C551	1-162-558-11	CERAMIC	100PF	10%	2KV
C552	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C553	1-117-953-11	FILM	0.033MF	5%	400V
C554	1-107-665-11	ELECT	0.47MF	20%	400V
C555	1-162-134-11	CERAMIC	470PF	10%	2KV
C556	1-115-522-11	FILM	1MF	5%	250V
C557	1-107-683-11	ELECT	2.2MF	0	250V
C558	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C559	1-164-281-11	CERAMIC	0.001MF		2KV
C560	1-163-019-00	CERAMIC CHIP	0.0068MF	10%	50V
C561	1-104-664-11	ELECT	47MF	20%	25V
C562	1-164-281-11	CERAMIC	0.001MF		2KV
C564	1-126-960-11	ELECT	1MF	20%	50V
C565	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C566	1-106-383-00	MYLAR	0.047MF	10%	200V
C567	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C568	1-164-161-11	CERAMIC CHIP	0.0022MF	10%	50V
C569	1-107-597-11	CERAMIC	22PF	5%	500V
C570	1-113-481-11	FILM	1000PF	5%	630V
C571	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C572	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C573	1-104-665-11	ELECT	100MF	20%	25V
C574	1-163-275-11	CERAMIC CHIP	0.001MF	5%	50V
C601 ⚠	1-113-900-51	CERAMIC	470PF	10%	250V
C602 ⚠	1-107-533-51	FILM	1MF	20%	250V
C603 ⚠	1-107-533-51	FILM	1MF	20%	250V
C604 ⚠	1-113-926-91	CERAMIC	0.0047MF		250V
C605 ⚠	1-113-900-51	CERAMIC	470PF	10%	250V
C606 ⚠	1-113-926-91	CERAMIC	0.0047MF		250V
C609	1-137-399-11	FILM	0.1MF	5%	50V
C610	1-137-399-11	FILM	0.1MF	5%	50V
C611	1-126-964-11	ELECT	10MF	20%	50V
C613	1-126-963-11	ELECT	4.7MF	20%	50V
C614	1-104-665-11	ELECT	100MF	20%	25V
C615	1-137-370-11	FILM	0.01MF	5%	50V
C616	1-137-399-11	FILM	0.1MF	5%	50V
C617	1-126-933-11	ELECT	100MF	20%	10V
C618	1-130-029-00	FILM	8200PF	2%	50V

REF.NO.	PART NO.	DESCRIPTION			REMARK
C620	1-126-969-11	ELECT	220MF	20%	50V
C621	1-126-964-11	ELECT	10MF	20%	50V
C622	1-126-964-11	ELECT	10MF	20%	50V
C623	1-119-867-11	MYLAR	0.047MF	3%	1KV
C624	1-126-768-11	ELECT	2200MF	20%	16V
C625	1-126-795-11	ELECT	10MF	20%	25V
C626	1-137-399-11	FILM	0.1MF	5%	50V
C627	1-128-564-11	ELECT	220MF	20%	100V
C628	1-126-927-11	ELECT	2200MF	20%	10V
C629	1-126-927-11	ELECT	2200MF	20%	10V
C630	1-128-564-11	ELECT	220MF	20%	100V
C631	1-126-943-11	ELECT	2200MF	20%	25V
C632	1-126-943-11	ELECT	2200MF	20%	25V
C633	1-126-960-11	ELECT	1MF	20%	50V
C634	1-107-950-11	ELECT	3.3MF	20%	200V
C635	1-128-581-11	ELECT	4.7MF	20%	100V
C636	1-104-664-11	ELECT	47MF	20%	25V
C637	1-104-664-11	ELECT	47MF	20%	25V
C638	1-104-664-11	ELECT	47MF	20%	25V
C639	1-104-664-11	ELECT	47MF	20%	25V
C640	1-137-370-11	FILM	0.01MF	5%	50V
C641	1-107-888-11	ELECT	47MF	20%	25V
C642	1-107-888-11	ELECT	47MF	20%	25V
C643	1-128-564-11	ELECT	220MF	20%	100V
C644	1-119-867-11	MYLAR	0.047MF	3%	1KV
C645	1-137-479-11	FILM	1MF	10%	400V
C646	1-107-792-11	CERAMIC	100PF	5%	1KV
C647	1-113-707-11	ELECT(BLOCK)	220MF	20%	450V
C648	1-136-169-00	FILM	0.22MF	5%	50V
C650	1-102-074-00	CERAMIC	0.001MF	10%	50V
C651	1-137-370-11	FILM	0.01MF	5%	50V
C652	1-137-370-11	FILM	0.01MF	5%	50V
C653	1-101-821-00	CERAMIC	0.0022MF		500V
C658	1-102-121-00	CERAMIC	0.0022MF	10%	50V
C901	1-126-961-11	ELECT	2.2MF	20%	50V
C902	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C903	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C904	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C905	1-163-145-00	CERAMIC CHIP	0.0015MF	5%	50V
C906	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C907	1-163-275-11	CERAMIC CHIP	0.001MF	5%	50V
C910	1-126-934-11	ELECT	220MF	20%	16V
C911	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C912	1-106-383-00	MYLAR	0.047MF	10%	200V
C913	1-126-967-11	ELECT	47MF	20%	50V
C914	1-104-760-11	CERAMIC CHIP	0.047MF	10%	50V
C915	1-110-641-51	ELECT	33MF	20%	200V
C916	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C917	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C918	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C919	1-137-368-11	FILM	0.0047MF	5%	50V
C920	1-117-626-31	FILM	2000PF	3%	1.2KV
C921	1-137-372-11	FILM	0.022MF	5%	50V
C922	1-106-228-00	MYLAR	0.22MF	10%	100V
C923	1-106-220-00	MYLAR	0.1MF	10%	100V
C924	1-106-355-12	MYLAR	0.0033MF	10%	200V
C925	1-106-220-00	MYLAR	0.1MF	10%	100V
C926	1-136-105-00	FILM	0.33MF	5%	200V
C927	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C928	1-104-665-11	ELECT	100MF	20%	25V
C929	1-106-383-00	MYLAR	0.047MF	10%	200V
C1501	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C1502	1-137-399-11	FILM	0.1MF	5%	50V
C1503	1-137-399-11	FILM	0.1MF	5%	50V
C1504	1-164-161-11	CERAMIC CHIP	0.0022MF	10%	50V
C1505	1-163-003-11	CERAMIC CHIP	330PF	10%	50V
C1506	1-104-664-11	ELECT	47MF	20%	25V
C1507	1-137-399-11	FILM	0.1MF	5%	50V
C1508	1-137-399-11	FILM	0.1MF	5%	50V
C1509	1-104-664-11	ELECT	47MF	20%	25V
C1513	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C1514	1-107-914-11	ELECT	1000MF	20%	25V
C1515	1-163-037-11	CERAMIC CHIP	0.022MF	10%	50V
C1516	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C1517	1-107-894-11	ELECT	220MF	20%	35V
C1518	1-107-914-11	ELECT	1000MF	20%	25V
C1519	1-106-228-00	MYLAR	0.22MF	10%	100V
C1522	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V

<CONNECTOR>

CN501*	1-508-879-11	BASE POST
CN502*	1-564-515-11	PLUG, CONNECTOR 12P
CN503	1-564-595-11	PLUG, CONNECTOR 14P
CN504*	1-564-510-11	PLUG, CONNECTOR 7P
CN505	1-764-101-11	PIN, CONNECTOR (PC BOARD) 2P
CN506*	1-779-465-11	PIN, CONNECTOR (WITH PWB) 6P
CN507*	1-564-509-11	PLUG, CONNECTOR 6P
CN510*	1-564-511-11	PLUG, CONNECTOR 8P
CN601	1-691-960-11	PIN, CONNECTOR (PC BOARD) 3P
CN602*	1-784-222-11	PIN, CONNECTOR (WITH PWB)

<DIODE>

D001	8-719-109-85	ZENER DIODE RD5.1ESB2
D002	8-719-109-85	ZENER DIODE RD5.1ESB2
D004	8-719-109-85	ZENER DIODE RD5.1ESB2
D005	8-719-109-85	ZENER DIODE RD5.1ESB2
D010	8-719-109-85	ZENER DIODE RD5.1ESB2
D014	8-719-404-49	DIODE MA111
D017	8-719-404-49	DIODE MA111
D020	8-719-062-51	DIODE 1PS226-115
D021	8-719-062-51	DIODE 1PS226-115
D022	8-719-062-51	DIODE 1PS226-115
D023	8-719-062-51	DIODE 1PS226-115
D024	8-719-109-96	ZENER DIODE RD6.8ESB1
D027	8-719-109-85	ZENER DIODE RD5.1ESB2
D028	8-719-109-85	ZENER DIODE RD5.1ESB2
D029	8-719-801-78	DIODE 1SS184
D030	8-719-801-78	DIODE 1SS184
D031	8-719-109-85	ZENER DIODE RD5.1ESB2
D032	8-719-976-99	ZENER DIODE DTZ5.1B
D033	8-719-976-99	ZENER DIODE DTZ5.1B

D

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REF.NO.	PART NO.	DESCRIPTION	REMARK
D503	8-719-911-19	DIODE 1SS119-25	
D504	8-719-404-49	DIODE MA111	
D505	8-719-109-98	ZENER DIODE RD6.8ESB3	
D506	8-719-110-36	ZENER DIODE RD13ESB2	
D507	8-719-404-49	DIODE MA111	
D508	8-719-052-86	DIODE D2L40-TA	
D509	8-719-404-49	DIODE MA111	
D510	8-719-975-77	DIODE SB340	
D511	8-719-061-21	DIODE FMQ-G5FMS	
D512	8-719-109-85	ZENER DIODE RD5.1ESB2	
D513	8-719-109-85	ZENER DIODE RD5.1ESB2	
D514	8-719-911-19	DIODE 1SS119-25	
D515	8-719-911-19	DIODE 1SS119-25	
D516	8-719-901-19	DIODE V11N	
D517	8-719-951-30	DIODE ERA91-02	
D518	8-719-404-49	DIODE MA111	
D519	8-719-911-19	DIODE 1SS119-25	
D520	8-719-948-45	DIODE ERA22-08	
D522	8-719-911-19	DIODE 1SS119-25	
D523	8-719-911-19	DIODE 1SS119-25	
D524	8-719-901-19	DIODE V11N	
D525	8-719-109-93	ZENER DIODE RD6.2ESB2	
D601 ⚠	8-719-510-53	DIODE D4SB60L	
D602	8-719-911-19	DIODE 1SS119-25	
D603	8-719-110-57	ZENER DIODE RD22ESB2	
D604	8-719-510-02	DIODE D1NS4	
D605	8-719-110-31	ZENER DIODE RD12ESB2	
D606	8-719-970-87	DIODE ERA38-06	
D607	8-719-110-21	ZENER DIODE RD11ESB1	
D608	8-719-911-19	DIODE 1SS119-25	
D609	8-719-510-64	DIODE S2LA20F	
D610	8-719-069-63	DIODE ERB38-06V1	
D611	8-719-059-23	DIODE P6KE200AG23	
D612	8-719-027-43	DIODE S2L20UF	
D613	8-719-022-97	DIODE D2S4MF	
D614	8-719-052-90	DIODE D1NL40-TA2	
D615	8-719-052-86	DIODE D2L40-TA	
D616	8-719-031-78	DIODE S2L40F	
D617	8-719-052-91	DIODE D4SBS4-F	
D619	8-719-022-97	DIODE D2S4MF	
D620	8-719-110-63	ZENER DIODE RD24ESB3	
D621	8-719-911-19	DIODE 1SS119-25	
D622	8-719-029-04	DIODE D5L60	
D623	8-719-911-19	DIODE 1SS119-25	
D624	8-719-110-46	ZENER DIODE RD16ESB3	
D625	8-719-911-19	DIODE 1SS119-25	
D627	8-719-304-63	DIODE RM11C	
D901	8-719-404-49	DIODE MA111	
D902	8-719-158-49	ZENER DIODE RD12SB2	
D903	8-719-404-49	DIODE MA111	
D904	8-719-158-49	ZENER DIODE RD12SB2	
D905	8-719-404-49	DIODE MA111	
D906	8-719-404-49	DIODE MA111	
D907	8-719-404-49	DIODE MA111	
D908	8-719-404-49	DIODE MA111	
D910	8-719-110-36	ZENER DIODE RD13ESB2	
D912	8-719-110-46	ZENER DIODE RD16ESB3	
D913	8-719-979-58	DIODE EGP10D	
D914	8-719-110-46	ZENER DIODE RD16ESB3	
D915	8-719-911-19	DIODE 1SS119-25	
D916	8-719-977-81	ZENER DIODE DTZ33B	
D917	8-719-052-86	DIODE D2L40-TA	
D918	8-719-158-49	ZENER DIODE RD12SB2	
D919	8-719-109-85	ZENER DIODE RD5.1ESB2	
D1501	8-719-109-85	ZENER DIODE RD5.1ESB2	
D1502	8-719-109-85	ZENER DIODE RD5.1ESB2	
D1506	8-719-908-03	DIODE GP08D	
		<FUSE>	
F601 ⚠	1-576-233-11	FUSE (H.B.C.) (6.3A/250V)	
	1-533-223-11	HOLDER, FUSE ;F601	
		<FERRITE BEAD>	
FB001	1-414-598-11	INDUCTOR CHIP 0UH	
FB002	1-414-598-11	INDUCTOR CHIP 0UH	
FB501	1-410-397-21	FERRITE 1.1UH	
FB601	1-410-396-41	FERRITE 0.45UH	
FB602 ⚠	1-410-397-51	FERRITE 1.1UH	
FB901	1-410-397-21	FERRITE 1.1UH	
		<IC>	
IC001	8-759-531-24	IC MB90553PF-G-120-BND	
IC002	8-759-442-20	IC 24LC21AT/SN	
IC004	8-759-454-79	IC 24LC16BT/SN	
IC005	8-759-162-80	IC MM1170BFB	
IC007	8-752-078-46	IC CXA2043Q	
IC008	8-759-701-59	IC NJM78M09FA	
IC009	8-759-925-74	IC SN74HC04ANS	
IC010	8-752-083-83	IC CXA2044M-T6	
IC011	8-759-168-20	IC TA78L09S	
IC012	8-759-442-20	IC 24LC21AT/SN	
IC013	8-759-269-09	IC SN74HCT04ANS	
IC501	8-759-100-96	IC UPC4558G2	
IC502	8-759-803-42	IC LA6500-FA	
IC601	8-749-011-42	IC SI-3050F	
IC602	8-759-470-64	IC TOP223Y-BB	
IC603	8-749-013-78	IC MCR5102	
IC604	8-749-012-49	IC DM-57N	
IC605	8-759-450-47	IC BA05T	
IC606	8-759-482-62	IC MC33262P	
IC901	8-759-467-70	IC BA9756FS-E2	
IC1501	8-759-803-42	IC LA6500-FA	
IC1502	8-759-822-38	IC LA6510	
IC1504	8-759-444-82	IC LA7841L	
		<COIL>	
L001	1-412-537-31	INDUCTOR 100UH	
L002	1-412-549-11	INDUCTOR 1MMH	

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REF.NO.	PART NO.	DESCRIPTION	REMARK
L003	1-410-521-11	INDUCTOR 100UH	
L501	1-412-537-31	INDUCTOR 100UH	
L502	1-406-675-11	INDUCTOR 0UH	
L503	1-406-675-11	INDUCTOR 0UH	
L504	1-416-532-11	COIL, HORIZONTAL LINEARITY	
L505	1-406-675-11	INDUCTOR 0UH	
L506	1-416-531-11	COIL, HORIZONTAL LINEARITY	
L602	1-412-537-31	INDUCTOR 100UH	
L603	1-412-529-11	INDUCTOR 22UH	
L604	1-412-529-11	INDUCTOR 22UH	
L605	1-412-529-11	INDUCTOR 22UH	
L606	1-412-529-11	INDUCTOR 22UH	
L607	1-406-975-21	INDUCTOR 0UH	
L901	1-412-537-31	INDUCTOR 100UH	
L902	1-406-660-41	INDUCTOR 0UH	
		<PHOTO COUPLER>	
PH601	8-749-010-64	PHOTO COUPLER PC123F2	
PH602	8-749-010-64	PHOTO COUPLER PC123F2	
		<IC LINK>	
PS501⚠	1-533-592-31	LINK, IC (1.6A/90V AC, 60V DC)	
PS601⚠	1-533-593-31	LINK, IC (2A/90V AC, 60V DC)	
PS901⚠	1-533-592-31	LINK, IC (1.6A/90V AC, 60V DC)	
		<TRANSISTOR>	
Q002	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q006	8-729-216-22	TRANSISTOR 2SA1162-G	
Q008	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q009	8-729-216-22	TRANSISTOR 2SA1162-G	
Q503	8-729-216-22	TRANSISTOR 2SA1162-G	
Q504	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q505	8-729-216-22	TRANSISTOR 2SA1162-G	
Q507	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q509	8-729-901-97	TRANSISTOR 2SA1036K-Q	
Q510	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q511	8-729-031-89	TRANSISTOR 2SC3941A-Q(TA)	
Q512	8-729-807-12	TRANSISTOR 2SD1802-S	
Q514	8-729-035-54	TRANSISTOR 2SJ449	
Q516	8-729-800-32	TRANSISTOR 2SC2362K-G	
Q517	8-729-140-50	TRANSISTOR 2SC3209LK	
Q518	8-729-043-73	TRANSISTOR IRLI540GSLF33	
Q519	8-729-033-99	TRANSISTOR 2SC5301-CC	
Q520	8-729-043-73	TRANSISTOR IRLI540GSLF33	
Q522	8-729-043-72	TRANSISTOR IRLI530GSLF33	
Q523	8-729-043-72	TRANSISTOR IRLI530GSLF33	
Q524	8-729-043-72	TRANSISTOR IRLI530GSLF33	
Q525	8-729-216-22	TRANSISTOR 2SA1162-G	
Q526	8-729-901-00	TRANSISTOR DTC124EK	
Q527	8-729-033-25	TRANSISTOR DTC114GKA	
Q528	8-729-204-91	TRANSISTOR 2SA1049-GR	
Q529	8-729-178-43	TRANSISTOR 2SC2784-E	
Q530	8-729-207-89	TRANSISTOR 2SA1358-Y	
Q531	8-729-207-82	TRANSISTOR 2SC3421-Y	
Q532	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q533	8-729-901-00	TRANSISTOR DTC124EK	
Q534	8-729-901-00	TRANSISTOR DTC124EK	
Q601	8-729-033-25	TRANSISTOR DTC114GKA	
Q602	8-729-029-47	TRANSISTOR DTA143ESA-TP	
Q603	8-729-033-25	TRANSISTOR DTC114GKA	
Q604	8-729-033-26	TRANSISTOR DTA114GKAT146	
Q605	8-729-041-65	TRANSISTOR 2SK2195F04	
Q606	8-729-029-47	TRANSISTOR DTA143ESA-TP	
Q607	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q608	8-729-033-26	TRANSISTOR DTA114GKAT146	
Q609	8-729-033-25	TRANSISTOR DTC114GKA	
Q610	8-729-029-66	TRANSISTOR DTC114ESA	
Q612	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q901	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q902	8-729-216-22	TRANSISTOR 2SA1162-G	
Q903	8-729-901-97	TRANSISTOR 2SA1036K-Q	
Q904	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q905	8-729-035-54	TRANSISTOR 2SJ449	
Q906	8-729-041-58	TRANSISTOR 2SK2675	
		<RESISTOR>	
R001	1-216-057-00	RES,CHIP 2.2K 5% 1/10W	
R003	1-216-057-00	RES,CHIP 2.2K 5% 1/10W	
R005	1-216-025-91	RES,CHIP 100 5% 1/10W	
R007	1-216-057-00	RES,CHIP 2.2K 5% 1/10W	
R013	1-216-057-00	RES,CHIP 2.2K 5% 1/10W	
R015	1-216-017-91	RES,CHIP 47 5% 1/10W	
R018	1-216-017-91	RES,CHIP 47 5% 1/10W	
R021	1-216-017-91	RES,CHIP 47 5% 1/10W	
R022	1-216-017-91	RES,CHIP 47 5% 1/10W	
R023	1-216-025-91	RES,CHIP 100 5% 1/10W	
R027	1-216-049-91	RES,CHIP 1K 5% 1/10W	
R029	1-216-049-91	RES,CHIP 1K 5% 1/10W	
R030	1-216-049-91	RES,CHIP 1K 5% 1/10W	
R031	1-216-057-00	RES,CHIP 2.2K 5% 1/10W	
R032	1-216-049-91	RES,CHIP 1K 5% 1/10W	
R034	1-216-049-91	RES,CHIP 1K 5% 1/10W	
R035	1-216-671-11	METAL CHIP 6.8K 0.50% 1/10W	
R036	1-216-073-00	RES,CHIP 10K 5% 1/10W	
R037	1-216-049-91	RES,CHIP 1K 5% 1/10W	
R038	1-216-295-91	SHORT 0	
R040	1-216-049-91	RES,CHIP 1K 5% 1/10W	
R041	1-216-049-91	RES,CHIP 1K 5% 1/10W	
R043	1-216-065-91	RES,CHIP 4.7K 5% 1/10W	
R045	1-216-295-91	SHORT 0	
R046	1-216-295-91	SHORT 0	
R047	1-216-065-91	RES,CHIP 4.7K 5% 1/10W	
R048	1-216-073-00	RES,CHIP 10K 5% 1/10W	
R049	1-216-073-00	RES,CHIP 10K 5% 1/10W	
R050	1-216-025-91	RES,CHIP 100 5% 1/10W	
R051	1-216-065-91	RES,CHIP 4.7K 5% 1/10W	
R052	1-216-025-91	RES,CHIP 100 5% 1/10W	
R053	1-216-097-91	RES,CHIP 100K 5% 1/10W	

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REF.NO.	PART NO.	DESCRIPTION			REMARK
R054	1-216-089-91	RES,CHIP	47K	5%	1/10W
R055	1-216-089-91	RES,CHIP	47K	5%	1/10W
R056	1-216-017-91	RES,CHIP	47	5%	1/10W
R057	1-216-025-91	RES,CHIP	100	5%	1/10W
R058	1-216-049-91	RES,CHIP	1K	5%	1/10W
R059	1-216-295-91	SHORT	0		
R060	1-216-025-91	RES,CHIP	100	5%	1/10W
R061	1-216-073-00	RES,CHIP	10K	5%	1/10W
R062	1-216-025-91	RES,CHIP	100	5%	1/10W
R063	1-216-025-91	RES,CHIP	100	5%	1/10W
R064	1-216-017-91	RES,CHIP	47	5%	1/10W
R065	1-216-111-91	RES,CHIP	390K	5%	1/10W
R066	1-216-073-00	RES,CHIP	10K	5%	1/10W
R067	1-216-679-11	METAL CHIP	15K	0.50%	1/10W
R068	1-216-073-00	RES,CHIP	10K	5%	1/10W
R069	1-216-049-91	RES,CHIP	1K	5%	1/10W
R070	1-216-061-00	RES,CHIP	3.3K	5%	1/10W
R071	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R072	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R073	1-216-073-00	RES,CHIP	10K	5%	1/10W
R074	1-216-049-91	RES,CHIP	1K	5%	1/10W
R075	1-216-681-11	METAL CHIP	18K	0.50%	1/10W
R076	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R077	1-216-049-91	RES,CHIP	1K	5%	1/10W
R078	1-216-073-00	RES,CHIP	10K	5%	1/10W
R079	1-216-049-91	RES,CHIP	1K	5%	1/10W
R080	1-216-049-91	RES,CHIP	1K	5%	1/10W
R081	1-216-661-11	METAL CHIP	2.7K	0.50%	1/10W
R082	1-216-073-00	RES,CHIP	10K	5%	1/10W
R084	1-216-073-00	RES,CHIP	10K	5%	1/10W
R085	1-216-049-91	RES,CHIP	1K	5%	1/10W
R086	1-216-073-00	RES,CHIP	10K	5%	1/10W
R087	1-216-679-11	METAL CHIP	15K	0.50%	1/10W
R088	1-216-089-91	RES,CHIP	47K	5%	1/10W
R089	1-216-025-91	RES,CHIP	100	5%	1/10W
R090	1-216-025-91	RES,CHIP	100	5%	1/10W
R091	1-216-025-91	RES,CHIP	100	5%	1/10W
R092	1-216-025-91	RES,CHIP	100	5%	1/10W
R093	1-216-025-91	RES,CHIP	100	5%	1/10W
R094	1-216-025-91	RES,CHIP	100	5%	1/10W
R095	1-216-025-91	RES,CHIP	100	5%	1/10W
R096	1-216-025-91	RES,CHIP	100	5%	1/10W
R097	1-216-039-00	RES,CHIP	390	5%	1/10W
R098	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W
R501	1-216-097-91	RES,CHIP	100K	5%	1/10W
R502	1-216-049-91	RES,CHIP	1K	5%	1/10W
R503	1-216-097-91	RES,CHIP	100K	5%	1/10W
R504	1-216-073-00	RES,CHIP	10K	5%	1/10W
R505	1-216-081-00	RES,CHIP	22K	5%	1/10W
R506	1-216-033-00	RES,CHIP	220	5%	1/10W
R507	1-216-093-00	RES,CHIP	68K	5%	1/10W
R508	1-216-073-00	RES,CHIP	10K	5%	1/10W
R509	1-249-421-11	CARBON	2.2K	5%	1/4W
R510	1-216-033-00	RES,CHIP	220	5%	1/10W
R511	1-216-025-91	RES,CHIP	100	5%	1/10W
R512	1-219-755-11	CARBON	10M	5%	1/2W
R513	1-216-097-91	RES,CHIP	100K	5%	1/10W
R514	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R515	1-216-683-11	METAL CHIP	22K	0.50%	1/10W
R516	1-216-683-11	METAL CHIP	22K	0.50%	1/10W
R517	1-216-009-00	RES,CHIP	22	5%	1/10W
R518	1-216-073-00	RES,CHIP	10K	5%	1/10W
R519	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R520	1-216-097-91	RES,CHIP	100K	5%	1/10W
R521	1-219-510-11	CARBON	470K	5%	1/2W
R522	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R523	1-216-097-91	RES,CHIP	100K	5%	1/10W
R524	1-216-619-11	METAL CHIP	47	0.50%	1/10W
R525	1-216-675-11	METAL CHIP	10K	0.50%	1/10W
R526	1-260-296-11	CARBON	2.2	5%	1/2W
R527	1-215-860-11	METAL OXIDE	33	5%	1W F
R528	1-216-677-11	METAL CHIP	12K	0.50%	1/10W
R529	1-216-683-11	METAL CHIP	22K	0.50%	1/10W
R530	1-216-073-00	RES,CHIP	10K	5%	1/10W
R531	1-216-081-00	RES,CHIP	22K	5%	1/10W
R532	1-216-683-11	METAL CHIP	22K	0.50%	1/10W
R533	1-216-073-00	RES,CHIP	10K	5%	1/10W
R534	1-216-683-11	METAL CHIP	22K	0.50%	1/10W
R535	1-216-049-91	RES,CHIP	1K	5%	1/10W
R536	1-216-425-11	METAL OXIDE	56	5%	1W F
R537	1-216-073-00	RES,CHIP	10K	5%	1/10W
R538	1-216-073-00	RES,CHIP	10K	5%	1/10W
R539	1-219-677-11	METAL	1.8	5%	10W
R540	1-216-679-11	METAL CHIP	15K	0.50%	1/10W
R541	1-216-673-11	METAL CHIP	8.2K	0.50%	1/10W
R542	1-216-049-91	RES,CHIP	1K	5%	1/10W
R543	1-249-429-11	CARBON	10K	5%	1/4W
R544	1-216-423-11	METAL OXIDE	27	5%	1W F
R546	1-216-049-91	RES,CHIP	1K	5%	1/10W
R548	1-216-674-11	METAL CHIP	9.1K	0.50%	1/10W
R549	1-216-039-00	RES,CHIP	390	5%	1/10W
R551	1-216-049-91	RES,CHIP	1K	5%	1/10W
R553	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W
R554	1-249-429-11	CARBON	10K	5%	1/4W F
R555	1-216-049-91	RES,CHIP	1K	5%	1/10W
R557	1-216-385-11	METAL OXIDE	0.47	5%	3W F
R558	1-216-097-91	RES,CHIP	100K	5%	1/10W
R559	1-216-049-91	RES,CHIP	1K	5%	1/10W
R560	1-260-096-11	CARBON	560	5%	1/2W
R561	1-249-413-11	CARBON	470	5%	1/4W F
R562	1-260-316-51	CARBON	100	5%	1/2W
R563	1-215-886-11	METAL OXIDE	100	5%	2W F
R564	1-216-049-91	RES,CHIP	1K	5%	1/10W
R565	1-216-079-00	RES,CHIP	18K	5%	1/10W
R566	1-260-314-11	CARBON	68	5%	1/2W
R567	1-249-403-11	CARBON	68	5%	1/4W
R568	1-214-840-00	METAL	100	1%	1/2W
R569	1-216-073-00	RES,CHIP	10K	5%	1/10W
R570	1-249-429-11	CARBON	10K	5%	1/4W F
R571	1-216-081-00	RES,CHIP	22K	5%	1/10W
R572	1-249-437-11	CARBON	47K	5%	1/4W
R573	1-249-437-11	CARBON	47K	5%	1/4W

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REF.NO.	PART NO.	DESCRIPTION			REMARK
R574	1-249-437-11	CARBON	47K	5% 1/4W	
R575	1-249-437-11	CARBON	47K	5% 1/4W	
R576	1-249-437-11	CARBON	47K	5% 1/4W	
R577	1-249-389-11	CARBON	4.7	5% 1/4W	F
R578	1-216-051-00	RES,CHIP	1.2K	5% 1/10W	
R580	1-249-430-11	CARBON	12K	5% 1/4W	
R582	1-249-413-11	CARBON	470	5% 1/4W	F
R583	1-249-389-11	CARBON	4.7	5% 1/4W	F
R584	1-249-389-11	CARBON	4.7	5% 1/4W	F
R587	1-216-357-00	METAL OXIDE	4.7	5% 1W	F
R589	1-216-643-11	METAL CHIP	470	0.50% 1/10W	
R590	1-247-815-91	CARBON	220	5% 1/4W	
R591	1-249-393-11	CARBON	10	5% 1/4W	F
R592	1-216-341-11	METAL OXIDE	0.22	5% 1W	F
R593	1-216-667-11	METAL CHIP	4.7K	0.50% 1/10W	
R594	1-216-691-11	METAL CHIP	47K	0.50% 1/10W	
R595	1-216-065-91	RES,CHIP	4.7K	5% 1/10W	
R596	1-216-057-00	RES,CHIP	2.2K	5% 1/10W	
R597	1-216-643-11	METAL CHIP	470	0.50% 1/10W	
R598	1-216-101-00	RES,CHIP	150K	5% 1/10W	
R601 ⚠	1-202-880-91	SOLID	330K	20% 1/2W	
R602	1-260-089-11	CARBON	150	5% 1/2W	
R603	1-249-403-11	CARBON	68	5% 1/4W	
R604	1-215-428-00	METAL	2K	1% 1/4W	
R605	1-202-933-61	FUSIBLE	0.1	10% 1/2W	F
R607	1-216-073-00	RES,CHIP	10K	5% 1/10W	
R608	1-216-342-11	METAL OXIDE	0.27	5% 1W	F
R610	1-215-445-00	METAL	10K	1% 1/4W	
R611	1-249-389-11	CARBON	4.7	5% 1/4W	F
R613	1-247-791-91	CARBON	22	5% 1/4W	
R614	1-215-861-00	METAL OXIDE	47	5% 1W	F
R615	1-249-413-11	CARBON	470	5% 1/4W	
R616	1-249-441-11	CARBON	100K	5% 1/4W	
R617	1-249-417-11	CARBON	1K	5% 1/4W	
R619	1-215-419-00	METAL	820	1% 1/4W	
R620	1-215-403-00	METAL	180	1% 1/4W	
R621	1-215-459-00	METAL	39K	1% 1/4W	
R622	1-215-481-00	METAL	330K	1% 1/4W	
R623	1-247-815-91	CARBON	220	5% 1/4W	
R624	1-249-417-11	CARBON	1K	5% 1/4W	
R625	1-249-413-11	CARBON	470	5% 1/4W	F
R628	1-249-417-11	CARBON	1K	5% 1/4W	
R629	1-215-443-00	METAL	8.2K	1% 1/4W	
R630	1-215-484-00	METAL	430K	1% 1/4W	
R631	1-215-484-00	METAL	430K	1% 1/4W	
R633	1-249-389-11	CARBON	4.7	5% 1/4W	F
R634	1-249-429-11	CARBON	10K	5% 1/4W	
R635	1-215-880-00	METAL OXIDE	10	5% 2W	F
R636	1-215-484-00	METAL	430K	1% 1/4W	
R638	1-247-807-31	CARBON	100	5% 1/4W	
R639	1-247-863-91	CARBON	22K	5% 1/4W	
R640	1-247-863-91	CARBON	22K	5% 1/4W	
R641	1-215-482-00	METAL	360K	1% 1/4W	
R642	1-215-485-00	METAL	470K	1% 1/4W	
R643	1-215-485-00	METAL	470K	1% 1/4W	
R644	1-215-485-00	METAL	470K	1% 1/4W	
R645	1-215-481-00	METAL	330K	1% 1/4W	
R646	1-215-462-00	METAL	51K	1% 1/4W	
R647	1-215-451-00	METAL	18K	1% 1/4W	
R648	1-215-443-00	METAL	8.2K	1% 1/4W	
R649	1-215-861-00	METAL OXIDE	47	5% 1W	F
R651	1-249-429-11	CARBON	10K	5% 1/4W	
R652	1-249-429-11	CARBON	10K	5% 1/4W	
R653	1-215-485-00	METAL	470K	1% 1/4W	
R656	1-215-485-00	METAL	470K	1% 1/4W	
R657	1-215-473-00	METAL	150K	1% 1/4W	
R658	1-215-421-00	METAL	1K	1% 1/4W	
R659	1-249-429-11	CARBON	10K	5% 1/4W	
R660	1-249-421-11	CARBON	2.2K	5% 1/4W	
R663	1-249-441-11	CARBON	100K	5% 1/4W	
R664	1-216-364-11	METAL OXIDE	0.39	5% 2W	F
R665	1-216-364-11	METAL OXIDE	0.39	5% 2W	F
R669	1-249-401-11	CARBON	47	5% 1/4W	
R674	1-247-895-91	CARBON	470K	5% 1/4W	
R901	1-216-065-91	RES,CHIP	4.7K	5% 1/10W	
R902	1-216-097-91	RES,CHIP	100K	5% 1/10W	
R903	1-218-762-11	METAL CHIP	270K	0.50% 1/10W	
R904	1-216-073-00	RES,CHIP	10K	5% 1/10W	
R905	1-216-061-00	RES,CHIP	3.3K	5% 1/10W	
R906	1-216-109-00	RES,CHIP	330K	5% 1/10W	
R907	1-216-065-91	RES,CHIP	4.7K	5% 1/10W	
R908	1-216-009-00	RES,CHIP	22	5% 1/10W	
R909	1-216-073-00	RES,CHIP	10K	5% 1/10W	
R910	1-216-397-11	METAL OXIDE	4.7	5% 3W	F
R911	1-216-081-00	RES,CHIP	22K	5% 1/10W	
R912	1-216-057-00	RES,CHIP	2.2K	5% 1/10W	
R913	1-216-025-91	RES,CHIP	100	5% 1/10W	
R914	1-216-073-00	RES,CHIP	10K	5% 1/10W	
R915	1-216-065-91	RES,CHIP	4.7K	5% 1/10W	
R916	1-216-033-00	RES,CHIP	220	5% 1/10W	
R917	1-249-397-11	CARBON	22	5% 1/4W	F
R918	1-216-033-00	RES,CHIP	220	5% 1/10W	
R919	1-219-727-11	METAL	68	5% 10W	
R920	1-249-389-11	CARBON	4.7	5% 1/4W	F
R921	1-219-748-11	CARBON	4.7K	5% 1/2W	
R922	1-216-675-11	METAL CHIP	10K	0.50% 1/10W	
R923	1-216-653-11	METAL CHIP	1.2K	0.50% 1/10W	
R924	1-220-825-11	CARBON	330K	5% 1/2W	
R925	1-216-073-00	RES,CHIP	10K	5% 1/10W	
R926	1-219-748-11	CARBON	4.7K	5% 1/2W	
R927	1-216-049-91	RES,CHIP	1K	5% 1/10W	
R928	1-216-653-11	METAL CHIP	1.2K	0.50% 1/10W	
R930	1-216-089-91	RES,CHIP	47K	5% 1/10W	
R932	1-216-085-00	RES,CHIP	33K	5% 1/10W	
R933	1-216-091-00	RES,CHIP	56K	5% 1/10W	
R934	1-216-668-11	METAL CHIP	5.1K	0.50% 1/10W	
R935	1-216-089-91	RES,CHIP	47K	5% 1/10W	
R936	1-216-071-00	RES,CHIP	8.2K	5% 1/10W	
R937	1-216-025-91	RES,CHIP	100	5% 1/10W	
R939	1-216-033-00	RES,CHIP	220	5% 1/10W	

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REF.NO.	PART NO.	DESCRIPTION			REMARK
R940	1-216-073-00	RES,CHIP	10K	5%	1/10W
R941	1-216-025-91	RES,CHIP	100	5%	1/10W
R942	1-219-748-11	CARBON	4.7K	5%	1/2W
R943	1-216-073-00	RES,CHIP	10K	5%	1/10W
R1003	1-216-093-00	RES,CHIP	68K	5%	1/10W
R1004	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W
R1005	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W
R1008	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1009	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1021	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1022	1-216-089-91	RES,CHIP	47K	5%	1/10W
R1024	1-216-025-91	RES,CHIP	100	5%	1/10W
R1025	1-216-025-91	RES,CHIP	100	5%	1/10W
R1028	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R1029	1-216-049-91	RES,CHIP	1K	5%	1/10W
R1030	1-216-073-00	RES,CHIP	10K	5%	1/10W
R1031	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R1032	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R1035	1-216-073-00	RES,CHIP	10K	5%	1/10W
R1036	1-249-389-11	CARBON	4.7	5%	1/4W F
R1037	1-249-389-11	CARBON	4.7	5%	1/4W F
R1038	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R1039	1-216-041-00	RES,CHIP	470	5%	1/10W
R1501	1-216-077-00	RES,CHIP	15K	5%	1/10W
R1502	1-216-075-00	RES,CHIP	12K	5%	1/10W
R1503	1-216-075-00	RES,CHIP	12K	5%	1/10W
R1504	1-216-689-11	RES,CHIP	39K	5%	1/10W
R1505	1-249-383-11	CARBON	1.5	5%	1/4W F
R1506	1-216-473-11	METAL OXIDE	56	5%	3W F
R1507	1-249-383-11	CARBON	1.5	5%	1/4W F
R1508	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R1509	1-216-298-00	RES,CHIP	2.2	5%	1/10W
R1510	1-249-383-11	CARBON	1.5	5%	1/4W F
R1511	1-216-077-00	RES,CHIP	15K	5%	1/10W
R1512	1-216-105-91	RES,CHIP	220K	5%	1/10W
R1513	1-216-298-00	RES,CHIP	2.2	5%	1/10W
R1514	1-249-383-11	CARBON	1.5	5%	1/4W F
R1515	1-216-089-91	RES,CHIP	47K	5%	1/10W
R1516	1-215-885-00	METAL OXIDE	68	5%	2W F
R1517	1-216-071-00	RES,CHIP	8.2K	5%	1/10W
R1518	1-216-077-00	RES,CHIP	15K	5%	1/10W
R1519	1-216-073-00	RES,CHIP	10K	5%	1/10W
R1520	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1521	1-249-383-11	CARBON	1.5	5%	1/4W F
R1522	1-216-085-00	RES,CHIP	33K	5%	1/10W
R1523	1-215-886-11	METAL OXIDE	100	5%	2W F
R1525	1-216-077-00	RES,CHIP	15K	5%	1/10W
R1526	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W
R1531	1-214-792-00	METAL	1	1%	1/2W
R1532	1-216-073-00	RES,CHIP	10K	5%	1/10W
R1533	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W
R1534	1-216-393-00	METAL OXIDE	2.2	5%	3W F
R1535	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R1537	1-216-687-11	METAL CHIP	33K	0.50%	1/10W
R1538	1-215-866-11	METAL OXIDE	330	5%	1W F
R1539	1-249-383-11	CARBON	1.5	5%	1/4W F
R1540	1-216-393-00	METAL OXIDE	2.2	5%	3W F
R1541	1-214-792-00	METAL	1	1%	1/2W
R1542	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W
R1543	1-216-073-00	RES,CHIP	10K	5%	1/10W
R1544	1-216-101-00	RES,CHIP	150K	5%	1/10W
		<VARIABLE RESISTOR>			
⊠ RV901	⚠1-241-767-21	RES, ADJ, CERMET	100K		(HV ADJ)
	3-710-578-01	COVER, VOLUME, 6 MOLD ; RV901			
		<RELAY>			
RY501	1-755-137-11	RELAY			
RY601	1-515-840-11	RELAY			
RY602	⚠1-515-669-21	RELAY			
		<SPARK GAP>			
SG901	1-519-422-11	GAP, SPARK			
SG902	1-517-499-21	GAP, SPARK			
SG903	1-519-422-11	GAP, SPARK			
		<SWITCH>			
SW601	⚠1-571-433-31	SWITCH, PUSH (AC POWER)			
		<TRANSFORMER>			
T501	1-431-056-11	TRANSFORMER, FERRITE (HDT)			
T502	1-431-414-11	TRANSFORMER, FERRITE (DFT)			
T503	1-411-594-11	INDUCTOR	0UH		
T504	1-431-443-11	TRANSFORMER, FERRITE (HST)			
T505	1-429-301-11	TRANSFORMER, FERRITE (HCT)			
T601	⚠1-429-180-11	TRANSFORMER, LINE FILTER			
T602	1-431-678-11	TRANSFORMER, FERRITE (PFT)			
T603	1-431-565-31	TRANSFORMER, CONVERTER (SRT)			
T604	⚠1-431-679-11	TRANSFORMER, CONVERTER (PIT)			
T901	⚠X-4035-425-1	TRANSFORMER ASSY, FLYBACK			(NX-4500//J1E4)
T902	1-411-567-11	INDUCTOR	0UH		
		<THERMISTOR>			
TH501	1-807-796-11	THERMISTOR			
TH601	1-809-260-11	THERMISTOR, POWER			
THP601	⚠1-809-827-11	THERMISTOR, POSITIVE			
		<VARISTOR>			
VDR601	1-810-622-11	VARISTOR			
VDR602	⚠1-801-268-51	VARISTOR TNR14V471K660			

D H

REF.NO.	PART NO.	DESCRIPTION	REMARK
		<CRYSTAL>	
X001	1-567-781-61	VIBRATOR, CRYSTAL	
**********			
*	8-933-314-00	H BOARD, COMPLETE	
		**********	
*	4-049-002-01	HOLDER, LED (D806)	
		<CAPACITOR>	
C800	1-104-664-11	ELECT 47MF 20% 25V	
		<CONNECTOR>	
CN801 *	1-784-255-11	PIN, CONNECTOR (PWB) 10P	
		<DIODE>	
D806	8-719-045-19	DIODE SPB-26MVWF	
		<TRANSISTOR>	
Q802	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q803	8-729-119-78	TRANSISTOR 2SC2785-HFE	

REF.NO.	PART NO.	DESCRIPTION			REMARK
		<RESISTOR>			
R800	1-247-843-11	CARBON	3.3K	5%	1/4W
R801	1-249-411-11	CARBON	330	5%	1/4W
R802	1-249-411-11	CARBON	330	5%	1/4W
R803	1-249-413-11	CARBON	470	5%	1/4W
R804	1-249-413-11	CARBON	470	5%	1/4W
R805	1-249-415-11	CARBON	680	5%	1/4W
R806	1-249-417-11	CARBON	1K	5%	1/4W
R807	1-249-417-11	CARBON	1K	5%	1/4W
R808	1-249-426-11	CARBON	5.6K	5%	1/4W
R809	1-249-417-11	CARBON	1K	5%	1/4W
R810	1-249-417-11	CARBON	1K	5%	1/4W
R811	1-247-815-91	CARBON	220	5%	1/4W
R812	1-249-411-11	CARBON	330	5%	1/4W
		<SWITCH>			
S800	1-692-431-21	SWITCH, TACTILE (CONT+)			
S801	1-692-431-21	SWITCH, TACTILE (CONT-)			
S802	1-692-431-21	SWITCH, TACTILE (OSD)			
S803	1-692-431-21	SWITCH, TACTILE (BRT+)			
S804	1-692-431-21	SWITCH, TACTILE (BRT-)			
S806	1-692-431-21	SWITCH, TACTILE (ASC)			
S807	1-692-431-21	SWITCH, TACTILE (RESET)			

9-978-613-01

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